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ABSTRACT

A three-year pilot study was conducted to determine the noneconomic benefits of the Job Corps on the impact areas of jobs, society, and health. Representing seven Job Corps centers, a sample of 489 youth between the ages of 16 and 22 participated, of whom 85 percent were black and 87 percent were urban. In order to draw comparisons, the participants were chosen from three different groups: persisters or those who remained in the Job Corps at least three months; those who dropped out of the program earlier; and those who did not enroll. Of the twenty-one outcomes which were measured covering the three impact areas, persisters were found to have improved in eight areas (job seeking skills, job satisfaction, attitude toward authority, self-esteem, crime reduction, nutrition behavior, family relations, and leisure time), while dropouts only improved in two and nonenrollees in five. Particularly impressive was the Job Corps' impact on (1) crime reduction, which showed that the Corps can function effectively as a rehabilitation agent (delinquent females were found to have benefitted the most with only a four percent rate of recidivism among persisters, or compared to a much higher rate for nonenrolled and dropout females); and (2) health, which resulted from the Corps' providing free medical care to participants, including physical examinations, doctor visits, dental care, and family life and nutrition education. (Numerous tables throughout display various analyses of the data collected for this study.) (ELG)

The Noneconomic Impacts of the Job Corps

R&D Monograph 64

U.S. Department of Labor
Ray Marshall, Secretary

Employment and Training Administration
Ernest G. Green
Assistant Secretary for Employment and Training
1978

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FOREWORD

There has been an unfortunate tendency to evaluate many employment and training programs in terms of narrow economic, cost-benefit analyses alone. The public, therefore, is often not sufficiently aware of the social and rehabilitative effects of those programs.

The Job Corps is a good example of a program that should not be viewed so narrowly--a program in which the non-economic impacts are at least as important and possibly more so, than economic benefits such as higher earnings.

In Fiscal Year 1977, the Job Corps enrolled 41,209 young persons, many of whom were severely disadvantaged because of lack of education and training, poor work habits, ill health, and erratic labor market experience. Of these, 68.7 percent were male and 31.3 percent were female. Total minority enrollment was approximately 70 percent. The average age was 18 and the average reading level, at entry, was 5th grade. For these people, the Job Corps provides much more than vocational training for jobs. It provides a full-service program of health, educational, counseling, and recreational services in a residential setting, 24 hours a day, 7 days a week. It is a therapeutic milieu for these disadvantaged young men and women.

The social development objectives, the rehabilitative goals, and the remediation required may be expected to have economic benefits over time, but progress in these objectives deserves to be measured in its own right as a beneficial impact both to the individuals served and to society.

This monograph presents a report of a 3-year pilot study of the noneconomic impacts of the Job Corps. It is based on a sample of 489 Job Corps applicants in 6 metropolitan areas. Respondents in this study were black and 87 percent urban.

It should be kept in mind that this study is not an evaluation of the Job Corps as a whole. The sample was not random and the numbers are too small for generalization. The findings, therefore, are suggestive, not definitive. However, because of the great interest at the present time in the impacts of youth employment programs, it is important to identify and present findings which suggest the kind of noneconomic impacts which are measureable and which are worthy of further research.

A battery of tests was devised to measure 21 different noneconomic outcomes, distributed over three areas: (1) Job-related Impacts, (2) Social-Attitudinal Impacts, and (3) Health-related Impacts. For those who remained in the Job Corps at least 3 months--and the brevity of the time factor should be stressed--there was improvement on 8 measures. These were: Jobseeking Skills, Job Satisfaction, Attitude Toward Authority, Self-Esteem, Criminal Justice System Involvement, Nutrition Behavior, Family Relations, and Leisure Time. This improvement was, overall, better than that achieved by either dropouts or nonenrollees.

The Job Corps also offers preventive health services, such as health education and physical examinations, and medical treatment for both major and minor disorders. Enrollees are entitled to receive complete medical and dental care, including eye examinations and prescription eyeglasses, obstetrics and gynocology, psychiatry, and restorative dentistry, on an as-needed basis. The simple fact that 41,000 disadvantaged young people a year (soon, almost 100,000 due to planned doubling of the enrollment) are provided with comprehensive health services by the Job Corps is evidence of a major noneconomic benefit offered by the program to its participants. The larger society benefits as well, both from the number of diseases and conditions treated, and from the fact that good health greatly increases employability.

In the present study, enrollees were provided ten times as many medical visits as they would have received outside of the Job Corps. They averaged one visit every 21 days. The national average for low income civilian blacks in this age group is one visit every 215 days. These young people probably received better medical care than they had in their entire lives, and such intervention during adolescence will surely have positive effects in their later lives. The study revealed that physical examinations at entry identified previously untreated conditions among 14 percent of the enrollees. Vision difficulties, gonorrhea, and anemia were the most prevalent conditions found and treated. Identification of such disorders has positive impacts on current public health and on future employability. Furthermore, prevention and early detection is far more cost-effective than later treatment.

Job Corps enrollees had less criminal justice system involvement than a comparison group during the same 10-month period of time. For Job Corps enrollees, part of this time included their Job Corps tenure. Women, in particular, seemed to benefit from their Job Corps training; of those who stayed more than 3 months, a large proportion (32 percent) had previous criminal records. However, only 4 percent of these women had contact with the criminal justice system after Job Corps--a far greater reduction than was found for the comparison group of non-Job Corps women.

HOWARD ROSEN
Director
Office of Research
and Development

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Louise Scott, DOL Project Officer, provided monitoring assistance, patience and humor throughout the project's life. Frances Wattenberg provided feedback in the instrument development process. John Amos, Program Analyst in the Job Corps Office of Program Review, assisted our efforts by providing needed computer tapes on the study's participants. Jim Blackburn, and before him, Helen Adams, was the liaison person from Job Corps to the Office of Research and Development. Dr. Charles Hayman and Robert Poinsett helped design the medical substudy.

Many Abt Associates staff have worked on the project, including Louise Strayhorn, Deputy Project Director; Larry Kerpelman, Director of Research; Donald Muse, Quality Reviewer; Robert Jerrett, III, Management Reviewer; Cathy Cox, Project Secretary, and Barbara Jaffe, Director of Final Report Production. Analysts Richard Kendall, Richard Burns, Anne Crawford, Judith Ferguson, Lawrence Lad, William Walker, Lorrie Stuart, Barry Gettleman and James Goldberg contributed to the data collection and analysis efforts during the contract's three year history. Mary Hobson, Katherine Vincent and Melanie Wallace provided valuable assistance in the intake and monitoring of the data collection process. On-site interviewers who tracked the study's participants for posttests were: Michael Rodriguez, Major Terry, Carver Wright, Stephen Ettinger, Warren Anderson, Alfred Taylor, Eunice Nelson and Janet Davis.

Judith F. Goldberg
Project Director

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EXECUTIVE SUMMARY

The purpose of this study was to develop a battery of tests to measure the non-economic benefits of the Job Corps and to apply these tests to a limited (and not necessarily representative) sample of 489 young men and women in two Job Corps groups and a comparison group. Respondents in the study were between the ages of 16 and 22, 85 percent black, and 87 percent urban.

Summary

In many ways and for many youth, Job Corps is having a substantial impact. Benefits in the areas of health and crime reduction, in particular, were revealed by the study. In all areas of study, benefits accrued more strongly to those who remained in the program at least three months. These findings imply that the disadvantaged Job Corps enrollees are receiving not only vocational training, but also health and social services which benefit the larger society as well as the youth themselves. Crime reduction is an obvious example. The treatment of contagious diseases that might not have been identified without the Job Corps physical examination is another example of the personal and societal benefits of Job Corps. The fact that enrollees are learning about good nutrition will not only benefit their health but the health of their families in later life.

Results of the Study

In this study Job Corps had a positive impact on a number of non-economic outcomes. Twenty-one different outcomes were measured. Those who remained in Job Corps at least three months improved on eight different outcomes, compared to two for those who dropped out and five for those who did not enroll. Three months or more in Job Corps led to improvement in the following areas:

- Job Seeking Skills
- Job Satisfaction
- Attitude Toward Authority

- Self-Esteem
- Criminal Justice System Involvement
- Nutrition Behavior (2 scales)
- Family Relations
- Leisure Time

Job Corps provided benefits in all three areas of non-economic impacts studied: (1) Job-Related Impacts, (2) Social-Attitudinal Impacts, and (3) Health and Educational Impacts.

Specific Findings

- Crime Reduction: Job Corps enrollees had less criminal justice system involvement than the comparison group during the same 10-month period of time. For Job Corps enrollees part of this time included their Job Corps tenure. Women in particular seemed to benefit from their Job Corps training; of those who stayed more than three months a large proportion (32 percent) had previous criminal records. However, only 4 percent of these women had contact with the criminal justice system after Job Corps, a far greater reduction than was found for the comparison group of non-Job Corps women.

It appears as if Job Corps can be a rehabilitation agent for a large number of delinquent youth. Since previous studies of Job Corps indicate that post-program success depends in part on length of stay, it is encouraging to note that female ex-offenders tended to stay for a longer than average period of time. In addition, both male and female ex-offenders in the pilot sample improved significantly in a number of skill areas (Job Seeking Skills, Job Knowledge, Nutrition) while in Job Corps.

These findings have major implications for the young people themselves and for society at large. Disadvantaged young people, the group served by Job Corps, account for the majority of arrests and convictions in urban areas. Many programs refuse to admit young people with criminal records. Job Corps not only provides educational benefits and vocational training to such youth, but, as shown in this study, it also reduced recidivism. Crime reduction saves society money for courts, prisons and probation officers. It saves society from property damage, personal injury and anxiety. The cost of incarcerating a juvenile for a year is about $12,000, and the recidivism rate is alarmingly high. Job Corps, which costs $9,230 a year, can reduce recidivism, while also offering remedial education, vocational training and personal counseling, all important factors in rehabilitation.

> RECOMMENDATION: Job Corps should experiment, in some of the new centers, with programs for delinquent young people. It should recruit such enrollees from the criminal justice system. Whether young people should be "sentenced" to Job Corps is an unresolved issue, and experiments should include such young people in order to determine whether Job Corps can remain positive if it takes on a custodial function. What is already clear is that Job Corps can play an important role in the rehabilitation of ex-offenders.

- Health Benefits. Job Corps offers preventive health services, such as physical examinations, and medical treatment for both major and minor disorders. Enrollees are entitled to receive complete medical and dental care, including optometry, ob-gyn, psychiatry and restorative dentistry, on an as needed basis. The simple fact that 45,000 disadvantaged young people a year (soon, almost 100,000) are provided with complete health services by Job Corps is evidence of a major non-economic benefit offered by the program to its participants. The larger society benefits as well, both from the number of contagious diseases treated, and from the fact that good health greatly increases employability.

In the present study, enrollees were provided ten times as many medical visits as they would have received outside of Job Corps. They averaged one visit every 21 days. The national average for low income blacks in this age group is one visit every 215 days. These young people probably received better medical care than they had in their entire lives, and such intervention during adolescence will surely have positive impacts in their later lives. The study revealed that physical examinations at entry identified previously untreated conditions among 14 percent of the enrollees. Vision difficulties, venereal disease, and anemia were the most prevalent conditions found and treated. Identification of such disorders has positive impacts on current public health and on future employability. Furthermore, prevention and early detection is far more cost-effective than later treatment.

A large number of enrollees received dental care in Job Corps--68 percent of the eligible men and 82 percent of the eligible women. Dental care in adolescence has substantial impact on future dental health. Provision of such care in Job Corps will probably save a great deal of money and pain in the future for participants.

All Job Corps enrollees attend health education classes where nutrition, personal hygiene, birth control, and family living are taught. Behavioral impacts of this educational program were already evident only a few months after Job Corps termination. Given a choice of food for their next day's meals, participants who had spent three months or more in Job Corps chose more nutritious foods than the dropouts or the comparison group. This improvement was particularly strong among women with children, an indication that Job Corps' health education program is not only improving the health of participants but is benefiting the next generation as well.

The pilot study also revealed that Job Corps enrollment is not a factor in the tendency of members of this disadvantaged group to bear children at an early age. About 40 percent of female participants became pregnant either during or shortly after Job Corps. Although this number appears high, it is exactly the same as that of the comparison group.

> RECOMMENDATION: Job Corps is playing an important role in improving the health of disadvantaged young people, and it is not increasing the rate of teenage pregnancy. Nevertheless, it can be assumed that some of the pregnancies that do occur are unwanted. Job Corps, in some of its new centers, should experiment with educational and counseling programs that might reduce unwanted pregnancy.

- Employment Benefits: One of the objectives of Job Corps is to make youth more employable, through basic education, skill training, personal counseling, and health services. The present study compared the post-program employment rate of the Job Corps group with the rate of the comparison group. Among those who stayed in Job Corps at least three months, a larger number were employed full-time at the time of the post-test than those who had dropped out or not enrolled. This was particularly true for women. When part-time and full-time work are aggregated, however, those who did not enroll report the most consistent work history. Although the study did not document whether all respondents were actively seeking work, it should be noted that the reported unemployment rate for these respondents was about 80 percent, with the intervention of Job Corps training having little short-run impact.

> RECOMMENDATION: Job Corps should re-examine its post-program placement system, and perhaps link with one of the recently funded youth employment programs. Other studies have indicated that youth need specialized job development services to help them overcome the job market handicaps of age and lack of schooling. If such services are given, a larger proportion of these youth might be placed.

- Variation in Benefits Across Job Corps Centers. Seven Job Corps Centers were studied.* Based on a comparison of centers on attitudes, average length of stay and improvement on non-economic outcomes, the centers which emerged with the most positive findings were Atlanta and Portland.

The average length of stay at Atlanta was the longest (154 days). Atlanta women entered the Job Corps with the worst nutritional behavior and ended with the best. They also scored the highest on health information knowledge on the posttest. Their level of criminal justice system involvement on the posttest was the lowest of any group, although it was the highest of any predominantly women's center on the pretest.

Atlanta Corpswomen also seemed to like Job Corps better than enrollees in other centers. They responded strongly to the "which things did you like about Job Corps?" list and had few complaints on the "dislikes" list. At the time of the study ** the Atlanta center was unique within Job Corps because of its Solo Parent Program--an arrangement through which young mothers could live with their children in an efficiency apartment in the Job Corps center. During the day the women attended classes and activities while the children were cared for in the Child Development Center, an innovative on-center day care program. At night women took full responsibility for their children. Officials in Job Corps and at the center felt that the Solo Parent Program answered a serious need and was a great success. The center offered a normal program as well, and notes from center visits indicated that staff enthusiasm and Corpswomen motivation were high.

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* Atlanta, Georgia; Breckenridge, Kentucky; Cleveland, Ohio; Atterbury, Indiana; Pittsburgh, Pennsylvania; Keystone, Pennsylvania; and Portland, Oregon.

** Since then, the Solo Parent Program has been replaced by a similar, but non-residential, WIN Demonstration program.

Portland was another center where findings seemed quite positive. Although the length of stay was only average (110 days), this figure is biased by the fact that more than half of the youngsters who had been pretested were still in the center at posttest time, and therefore were dropped from the study. In actuality, Portland's average length of stay may have been much longer. (Job Corps has length of stay information on all enrollees.) Portland participants entered Job Corps with the highest scores among the seven centers in the sample on three variables: nutritional information, nutritional behavior, and confidence in the ability to succeed. After they left Job Corps they were still highest on nutritional information, and had become highest ranking on job knowledge, health information and self-esteem. (Portland students had been lowest on self-esteem on the pretest.) Project staff returned from their visit there with high praise for the staff, particularly the residential advisors in the women's dormitory. An increase in self-esteem in Portland was one of the findings predicted after the center visit, and the fact that it emerged significantly is a strong validation of the instrument battery administered to the participants. In addition, Portland participants reported positive feelings about the staff more than did those in any other center.

The Portland findings are particularly important because Portland was the only all-white (and the only completely coed) center in the study. The low initial self-esteem may arise from being poor in the relatively affluent and advantaged Pacific Northwest. These findings indicate that Job Corps has an important role to play for all disadvantaged youth, not only the disadvantaged minorities that comprised most of this study's sample.

No center offered a consistently negative profile to the extent that Atlanta and Portland were positive.

> RECOMMENDATION: Job Corps is clearly not a monolithic program; the outcomes and opinions differed widely from center to center. In establishing new centers, Job Corps should be aware that some centers are more worthy of replication than others. The Solo Parent Program at Atlanta, for example, should be copied elsewhere in Job Corps. In order to determine which centers--or which facets of particular centers--should be used as models, a survey of center practices and procedures should be undertaken with the express purpose of discriminating the successful from the unsuccessful. Corpsmember opinions have proven, in this study, to correlate with impacts. Thus, a survey of participants can yield much reliable information.

Job Corps has provided substantial non-economic benefits to its participants and to the larger society, according to the present study. Youth who enrolled in Job Corps and stayed at least three months improved in all areas of study, from eating habits to staying out of trouble; from self-esteem to dental care. On almost all outcomes, being in Job Corps at least three months was even more beneficial to women than to men. These impacts make Job Corps participants more employable and benefit the larger society in many ways. It is important to note that these benefits do not accrue to early dropouts. Job Corps must make a concerted effort either to screen out those who seem unlikely to survive the first weeks or to strengthen the program so that more enrollees will remain long enough to benefit. That such benefits are available has been made clear by this study.

1.0 INTRODUCTION

"Alternative education" is a term used to describe programs which try to succeed where the public school has failed. Dropouts and underachievers are referred to alternative education programs on the assumption that failure in a traditional school program does not necessarily mean that the student is unteachable, only that he or she is unteachable under the circumstances in which mass education is currently being offered. Giving the benefit of the doubt to the student is a new phenomenon; traditionally, both public and private schools have been regimented and rigid, leaving little alternative to the failing student other than resigning. Of course, an option that has been available for many years has been the change of curriculum; a student having difficulty with academic work could transfer to a vocational curriculum. Only in recent years, however, has the idea that certain students can learn academics better in alternative settings or with alternative teaching methods gained acceptability. Like many innovations in education, alternative educational opportunities have been concentrated in the more affluent suburban school systems.

Job Corps is an alternative education program for disadvantaged high school dropouts. Besides providing the vocational training that its name suggests, it extends the benefits of individualized instruction and ungraded classrooms to rural and core city youngsters, most of whom attended schools without such programs. Research over the last twenty years has indicated that "disadvantaged" is the proper word for describing the educational situation of youngsters whose family income lies below the poverty line. The absence of the advantages of a stimulating environment in the pre-school years and remedial opportunities in the elementary school years has powerful debilitating impacts by adolescence. Constant failure in school leads to dropping out early, and the lack of education and/or a diploma leads to joblessness, welfare or minimum wage jobs. Thus, the cycle begins again in a new generation.

Job Corps was conceived of as a second chance for disadvantaged youngsters -- to help them catch up on their schooling so that the cycle of poverty, which feeds on poor education and dead end jobs, might be broken in this generation.

The framers of Job Corps had another theory about breaking the cycle of poverty. They felt that as long as disadvantaged youngsters were living in deteriorated and crowded neighborhoods with inadequate nutrition and unproductive role models, they would have little motivation or capability to alter their inevitable destiny.

Job Corps was therefore conceived of as a therapeutic environment, a residential center where adolescents could learn, work, and play with the comfort of knowing that they would have a bed to sleep in, three square meals a day, preventive and therapeutic medical and dental services, and individual counseling to help them adjust and achieve. The goal was to make these former passengers on the "Failure Express" into self-supporting adults through basic education and vocational training. The other services were designed to upgrade their self-esteem and their health, as necessary components of employability development.

In the thirteen years since its inception, Job Corps has had its share of successes and failures. Tough, street-wise youngsters became surprisingly homesick when taken from their "debilitating environments" for, often, the first time. Job Corps Centers in beautiful national parks and forests were seen as sites of sensory deprivation by city kids accustomed to noise, traffic jams, and neon lights. Although center staff worked valiantly to acclimate the youngsters to their new, therapeutic surroundings, policymakers gradually made compromises as they realized that they were unwittingly placing the young participants in another bastion of middle-class values, where they would fail again. So, centers were opened in cities and participants were permitted to enroll as day students. Previously single-sexed centers became coed, and enrollees with low entrance-level achievement scores were no longer relegated to a school subjects-only curriculum while their peers learned auto mechanics or beauty culture.

The issue of middle-class and generally different values has not been an easy one for Job Corps to resolve, for a number of reasons. First, although the staff recruited to work with these young people were fully apprised of Job Corps' "second chance" philosophy, the relatively low staff salaries resulted in the hiring of a significant number of authoritarian staff members with backgrounds in the military and law enforcement. Although many liberal idealists were also recruited, the former group tended to be older and thus more likely to be placed in middle management at Job Corps centers.

Top management was usually taken from the middle rungs of the center contractor's organization, that is, industry or Forest Service veterans who knew little about alternative education or the problems of disadvantaged youth. Often, therefore, the disciplinary mentality of the middle management group prevailed, and crises arose in the 60's and early 70's over compulsory haircuts, dress codes, and dormitory spotlessness. Thus, one version of middle-class values was perpetrated through the values of the center staff.

To make matters more confusing, another contrasting version of middle-class values crept in via national policymakers. Job Corps began with an explicit policy of permissiveness, perhaps as an extrapolation from the concept of "free schools" which was so popular in the late 1960s among the upper middle class. It took years of retrenching to make up for this early misguided permissiveness and the chaos that often followed when over a thousand young, mostly black males were assembled near a small, predominantly white town and given freedom to "explore their environment." The fears of the local citizenry magnified the inevitable small incidents into tales of mass rape and pillage. The repression consequently imposed resulted in demonstrations and near riots--a self-fulfilling prophecy. Thus, the middle-class philosophy of permissive alternative education entered Job Corps policy and made a hasty exit. Thus, two types of values, antagonistic to each other, were both found to be antagonistic to the Corpsmembers.

Middle-class values were hard to come to terms with because the Job Corps concept contained a difficult paradox. Although there was a sincere commitment to alternative education, the program also operated under the assumption that these youngsters needed to assimilate the middle-class work ethic in order to be motivated to learn a trade and hold a steady job. This ethic, particularly in the case of blue-collar jobs, includes the virtues of punctuality, deference, and obedience, the same values which the public school had failed to inculcate. How could Job Corps offer alternative education and retain the focus on preparing youth for blue collar jobs?

The answer emerged from trial and error, but it also emerged from the Corpsmembers themselves. They asked for neither total freedom nor military discipline. More important, the work ethic was discovered to be alive and well within most Corpsmembers, although they previously had had little opportunity to see the value--partly genuine, partly merely symbolic--of the behaviors that the middle class associates with a positive attitude toward work. Like many middle-class teenagers of their generation, they refused to submit meekly to the regimentation still prevalent in most public schools. In addition, however, they had learning disabilities which compounded their alienation from the public school and the public school's exasperation with them. What young people wanted from Job Corps was a chance to learn at their own speed and get good vocational training.

What Job Corps is, then, is an alternative school set within an alternative environment, designed to offer the security and moral support necessary for the capabilities and motivations of disadvantaged school dropouts to emerge. It attempts, on several fronts, to restore some of the self-esteem that poverty and failure have eroded so thoroughly. Neither regimentation nor permissiveness hold sway, although practice varies from center to center along that continuum.

The program offered is standard throughout the country. Adolescents 16 to 21 years of age apply through their State Employment Service, and six to eight weeks later they are transported to either a large (1,000 or more Corpsmembers) center on a former Army base, a small (100-200 Corpsmembers) "Conservation Center" usually in a national park or forest, or a medium-sized (200-600 Corpsmembers) center, about two-thirds of which are in cities. Basic education (reading and math) and vocational training are the core of the program, with health education and "World of Work" (job-seeking skills and on-the-job behavior) offered as short required courses. Ninety-five percent of the trainees live on center, where recreational programs are provided for after school hours and weekends.

Because the proponents of quick solutions to long-standing problems invariably gain support when funding is tight, Job Corps has been forced to compromise some of its early principles. In the late 1960s Job Corps was reduced in size, and an austerity program was instituted. In addition, placement rate became the outcome the program was judged by, rather than learning or rehabilitation. The minimum age for entry, for example, was raised from 14 to 16, because placement was impossible for graduates under 16. Despite these cutbacks and compromises, Job Corps has survived, giving second chances to close to 50,000 youngsters a year.

Recent legislation has restored many of the budget cuts of the early 70's, and has authorized establishment of 60 new centers. Along with these tangible restorations, there are signs (of which this project is one) that a less limited sense of the outcomes of Job Corps can also be restored.

The purpose of the present study was to determine, through a pilot study, whether the impacts of the Job Corps and of specific program components not directly tied to job training could be assessed. Because it is the only major residential program funded by the Department of Labor, Job Corps' costs are high in comparison to those of other employment and training programs. Money is spent on room and board for enrollees, for counseling and recreational activities and for medical care. Job Corps officials have assumed that these extra-training services have extra-training benefits (e.g., better health, better mental health, better attitude toward work) which justify the investment. Yet no study had ever been performed to test that assumption. Nor had any researchers even explored ways of measuring these so-called non-economic impacts. All previous research on Job Corps' effectiveness (and there has been much research) has used placement rates and pre-post program wage differentials as dependent variables. This report was designed to begin to fill the gap in Job Corps research by presenting preliminary findings on the impact of the program and its support services on non-economic outcomes.

2.0 SUMMARY OF FINDINGS IN THREE BASIC AREAS OF STUDY

Analysis of non-economic impacts was performed by comparing the three study groups on twenty-two different variables, each of which was measured by means of a scale or an unscaled cluster of questionnaire items. Because it is difficult for a reader to retain and compare information on so many variables, this chapter presents a summary of findings. The 22 outcomes are grouped into three areas of study and are discussed as a group. The areas of study and their definitions are:

1. Job-Related Noneconomic Impacts -- This area of study includes on-the-job behavior, job interest and satisfaction and understanding of the world of work.
2. Social-Attitudinal Impacts -- This area of study includes attitudes and behavior about self, peers, family and authority figures.
3. Health and Educational Impacts -- This area of study includes knowledge and behavior regarding health, nutrition, and education.

Findings and statistical results on each of the 22 outcomes are discussed separately and in detail in Chapters 3, 4, and 5. In this chapter, however, a summary table is presented and explained for each of the three areas of study. The summary table offers information on intergroup comparisons for each outcome without statistical details. The reader should remember to refer to the appropriate section of Chapter 3, 4, or 5 for detailed discussions.

Six basic comparisons among and within groups are covered in the summary table for each outcome.

1. Group differences on pretest scores: The mean pretest scores of each group at time of Job Corps application are compared using analysis of variance (F test). There were expected to be no differences among groups at that time.

2. Group differences on posttest scores: The mean posttest scores of each group at the time of the follow-up interview are compared, again using analysis of variance (F test). Any inter-group differences at this time imply that the intervening treatment (Job Corps attendance or remaining outside Job Corps) had impact on that outcome.

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3. Pre-post changes among Persisters, Dropouts and NoShows: These are three separate within-group comparisons, using the t-test for repeated measures. This statistic measures whether or not the group changed its mean score over the ten month period from pretest to posttest. It was expected that mean scores of the two Job Corps groups would change over time and that mean scores of the comparison group would remain the same.

4. Pre-post changes (groups compared): This is a second-order comparison, in which an analysis of variance of change scores was performed. Its purpose was to determine whether any group's changes over time were significantly greater than the changes of the other two groups.

5. Male-female comparisons: Early in the analysis phase of this study, it became clear that men and women were impacted quite differently. Every outcome was therefore analyzed separately for men and women. In addition, male and female scores in each group were compared, using an analysis of variance. Because each group was divided almost evenly between males and females, it was possible for a finding to reach significance for the entire group based on a strong impact on only one sex. This box in the summary table notes such differential impact. In addition, it notes any other sex-based differences in impact not covered in the first six boxes.

6. Summary: This box repeats important notations in the upper seven boxes. Outcomes can be readily compared by reading the summary boxes of each across the page.

2.1 Job Related Non-Economic Impacts

Eleven of the twenty-one outcomes fall into this area of study. For convenience the eleven can be divided into four sub-areas:

1. Knowledge of Work
   - Job Seeking Skills
   - Job Holding Skills
   - Job Knowledge
2. Attitude Toward Work
   - Work Relevant Attitudes
   - Work Ethic
   - Lack of Job Skill Confidence

3. Interest in Work
    - Job Satisfaction
    - Vocational Aspirations #1 (Right Now)
    - Vocational Aspirations #2 (Two Years Ago)
    - Vocational Aspirations #3 (Two Years From Now)
4. Employment Status
    - At time of follow-up interview
    - Since Job Corps termination or application

The matrix of findings appears on the following pages (Table 2-1).

2.1.1 Knowledge of Work

On the three scales, there were no differences among groups at the time of the pretest. Over time, however, the NoShows recorded the most improvement, as they improved on two scales and did not change on the third. Persisters had the second best showing, with strong improvement on Job Seeking Skills and no change on the other two scales. Three conclusions can be drawn:

- In the Knowledge of Work subarea, being in the labor market led to more improvement than being in Job Corps.
- Job Corps Dropouts lost ground in the Knowledge of Work subarea.
- Remaining in Job Corps at least three months is far better than dropping out, but not as beneficial as remaining in the labor market.
- Ceiling effects on the Job Holding Skills Scale made improvement virtually impossible.

2.1.2 Attitude Toward Work

Again there were no differences on the pretest. On the posttest, few changes in attitude emerged, and those that did were negative. NoShows had no significant changes. Persisters recorded one significant decline, one non-significant decline and one non-significant improvement. Again the Dropouts brought up the rear, with significant declines on all three scales.

Two conclusions can be drawn:

- Attitudes about the value of work are not easily improved.
- Dropping out of Job Corps was associated with a significant and reliable negative change in attitudes toward work.

Table 2-1

Matrix of Findings on Job Related Non-Economic Impacts

	Job Seeking Skills	Job Holding Skills	Job Knowledge	Work Relevant Attitudes	Work Ethic	Lack of Job Skill Confidence
Pretest Scores (Persisters vs. Dropouts vs. NoShows)	No Differences	No Differences	No Differences	No Differences	No Differences	No Differences
Posttest Scores (Persisters vs. Dropouts vs. NoShows)	Overall*** No-Shows Higher than Dropouts	No Differences	NoShow Males* Higher than Other Males	No Differences	Overall* & Female* Persisters Higher than Overall & Female Dropouts	No Differences
Pre-Post Changes Among Persisters	Males*** and Females*** Improved	No Change	No Change	Males Decline^{ns}	Males Improved^{ns}	Overall*** & Males*** Increased
Pre-Post Changes Among Dropouts	Males Unchanged; Females Improved^{ns}	Overall* Decreased	Overall* and Female* Decreased	Overall** and Male*** Declined	Overall*** and Female*** Declined	Overall* & Males*** Increased
Pre-Post Changes Among NoShows	Males* and Females*** Improved	No Change	Overall* Improved	Females Declined^{ns}	Females Declined^{ns}	No Change
Pre-Post Changes (Groups Compared)	No Differences	No Differences	Overall & Dropout Females Decrease; NoShow Overall & Females Increase }*	No Differences	No Differences	No Differences
Male-Female Comparisons	No Differences	Female Dropouts Higher than Male Dropouts*** on Pretest	Female Dropouts Higher than Male Dropouts*** on Pretest Female Persisters Higher than Male Persisters on Pre*** and Post-tests***	No Differences	No Differences	Male Dropouts Increase More than Female Dropouts*
Summary	Persisters & NoShows Improved No Intergroup Differences	Dropouts Decreasedl Bi Intergroup Differences; Ceiling Effect Operating	Dropouts Decreased; NoShows Improved; Significant Differences Between These Two Groups	Significant Declines Among Dropouts	Significant Declines Among Dropouts	Persisters & Dropouts, especially Males, Increased (get worse)

* $p < .05$

** $p < .02$

*** $p < .01$

Table 2-1 (continued)

	Job Satisfaction	Vocational Aspirations #1 (Right Now)	Vocational Aspirations #2 (Two Years Ago)	Vocational Aspirations #3 (Two Years From Now)	Employment Status (Posttest Only)
Pretest Scores (Persisters vs. Dropouts vs. NoShows)	No Differences (Persisters Lowest)	No Differences	No Differences	NoShow Females Higher** than Dropout Females	N/A
Posttest Scores (Persisters vs. Dropouts vs. NoShows)	No Differences (Persisters Lowest)	Overall** and Female* NoShows Lower than Dropouts or Persisters	No Differences	NoShows Lower* than Persisters or Dropouts	% Time Worked After Job Corps***: Persisters: 21.2 Dropouts: 15.1 NoShows: 27.6
Pre-Post Changes Among Persisters	Overall***, Males** & Females*** Improved	No Changes	No Changes	No Changes	N/A
Pre-Post Changes Among Dropouts	Overall***, Males** and Females* Improved	No Changes	Overall* Increased	No Changes	N/A
Pre-Post Changes Among NoShows	Overall***, Males* and Females** Improved	Females Decreased***	No Changes	Overall*** and Female** Decreased	N/A
Pre-Post Changes (Groups Compared)	No Differences	No Differences	No Differences	NoShows Overall* and Females** Decrease More than Dropouts or NoShows	N/A
Male-Female Comparisons	No Differences	NoShow Females Decreased while NoShow Males Unchanged*	NoShow Females Higher** than NoShow Males on Pretest	NoShow Females Higher** than NoShow Males on Pretest	Male NoShows Employed More ns than Female NoShows
Summary	All Improved; No Intergroup Differences	NoShow Females Decreased; No Other Changes or Differences	Small Increase among Dropouts; No Other Changes or Differences	NoShow Females Began High and Ended Low	Even Controlling for Time Period Covered, NoShows Worked Significantly More Than Those Who Attended Job Corps

*p < .05

**p < .02

***p < .01

2.1.3 Interest in Work

This subarea covers job satisfaction and three vocational aspirations items. The job satisfaction items did not discriminate well among the three groups, nor were the items responded to differentially. All groups improved on all items over time. Persisters, however, tend to rate aspects of their jobs (pay, interest, chance for promotion, the boss) lower than other groups on both the pretest and the posttest. This difference may be interpreted as the reason for Persisters' remaining in Job Corps (poor previous jobs). Another interpretation is that Persisters rated their jobs lowest both before and after Job Corps because their standards were higher than those of other groups.

The vocational aspirations items asked the respondent to rate himself or herself on a "ladder" as of two years ago, as of now and as of two years from now. On the first item, estimates of previous vocational level increased for Dropouts, a probable reflection of the more negative situation of Dropouts at the time of the posttest. The other group with the worst employment situation at the time of the posttest, NoShow women, decreased significantly on "right now" assessments. Finally, on "two years from now," NoShows decreased, a sign that their choice of remaining in the labor market led them to see their prospects for the future more narrowly.

Two conclusions can be drawn:

- The Job Satisfaction Scale used in this study did not differentiate among groups well.
- Vocational aspirations of NoShows and Dropouts decreased over time, a sign that remaining in Job Corps led to a relatively more optimistic perception of the future.

2.1.4 Employment Status

There were no questions on the pretest regarding employment status. Job Corps records indicate, however, that almost all applicants were unemployed at that time.

On the posttest, NoShows and Persisters were more likely than Dropouts to report that they were currently working. Persisters were working full-time more often than members of the other groups. Female NoShows were the least likely to be working.

In the area of percentage of time worked since Job Corps termination (or application, in the case of NoShows) a significant difference emerged:

NoShows were employed 27.6% of the time, compared to 21.2% for Persisters and 15.1% for Dropouts.

A disappointing finding was that employment status did not correlate with any of the other scales in this area of study. Although there might be a number of reasons why those who scored high on these scales were not working, the finding calls the validity of the scales into question.

Three conclusions can be drawn:

- Job Corps had at least a short run negative impact on steadiness of employment.
- Those who stayed at least three months in Job Corps were more likely than either other group to be working full-time several months later.
- Job Corps had a bigger positive impact on employment for women than for men.

2.1.5 Summary - Job Related Non-Economic Impacts

Although Persisters did not emerge with flying colors on all scales, they scored as well as the NoShows and far better than the Dropouts.

The total picture in the area of Job Related Non-Economic Impacts shows declining scores on the part of Dropouts on almost every outcome, while NoShows declined on two and Persisters on only one. Because there were no differences among groups on the pre-test, it can be concluded that the negative Job Corps experience that led to dropping out had serious consequences in all job related areas.

The decline in vocational expectations on the part of women who did not attend Job Corps is paralleled by their high unemployment rate. Women who did attend Job Corps fared far better. They (Persisters and Dropouts) were as likely as their male counterparts to be working at the time of the follow-up interview. Female Persisters were impacted more positively than male Persisters in the area of attitudes; women maintained or improved their scores on every scale. These findings indicate that Job Corps attendance had major employment-related benefits for women.

An analysis of the areas in which Persisters improved indicates that many of their Job Corps experiences may have long term positive impacts. The fact that Persisters were most likely to be working full time and that they improved in Job Seeking Skills is an indication of potential for further vocational advancement.

2.2 Social-Attitudinal Impacts

Five outcomes are included in this area of study. All deal with the relationship of the youth to others in the community. (Self-esteem deals with the image of self in relation to others). The matrix of findings appears on the following page (Table 2-2).

On all five outcomes Persisters improved, while neither other group made substantial gains. As can be expected from social norms, males in all groups reported more involvement than females with the criminal justice system. However, there was a tendency for women who had previous court histories to stay in Job Corps at least three months and to stay out of trouble afterwards. Male Persisters also were somewhat less likely than other males to have further brushes with the law.

A further analysis of pre-Job Corps police involvement was made to determine whether Job Corps has differential effects on youngsters with and without police records. Youngsters with a history of criminal activity entered Job Corps with significantly lower scores on scales which measure factual knowledge, but they made up the difference during Job Corps. In addition, those who entered with such backgrounds reduced their scores on the posttest somewhat more than the sample as a whole. This is a particularly valuable non-economic impact.

Improvement by Persisters (particularly women) and slight declines by Dropouts led to significant between-group differences in Self Esteem at the time of the follow-up interview. NoShows did not change. Persisters also improved in Attitude Toward Authority.

Apparently, spending three months or more in Job Corps had positive impacts on attitudes toward peers and family as well. Both male and female Persisters reported positive changes on a number of these variables.

Three conclusions can be drawn:

- Job Corps reduced recidivism of youth (particularly women) with previous court histories.
- Job Corps had educational benefits for youth with previous court histories.
- Remaining in Job Corps at least three months had significant positive impacts on self-esteem, attitude toward authority and relations with family and friends. These impacts were not felt by Dropouts or NoShows.

Table 2-2

Matrix of Findings on Social-Attitudinal Impacts

	Attitude Toward Authority	Self-Esteem	Police Involvement	Family Relations	Leisure Time
Pretest Scores (Persisters vs. Dropouts vs. NoShows)	No Differences	No Differences	No Differences	N/A	N/A
Posttest Scores (Persisters vs. Dropouts vs. NoShows)	No Differences	No Differences	No Differences	Among Males Only, Persisters Felt Better than NoShows about their Families** and their Spouses**	NoShows Reported the Least Change; Persisters Reported the Most Positive Change
Pre-Post Changes Among Persisters	Overall* Increase	Overall* and Female* Increased	All Groups Decreased***	Females Improved Male Improved	Males Improved Females Improve Somewhat
Pre-Post Changes Among Dropouts	No Change	All Decrease^{ns}	Overall*** and Male*** Decrease	Females Reported the Least Change	Male Dropouts Reported More^{ns} Interest in Sports and Hobbies than Any Other Group
Pre-Post Changes Among NoShows	No Change	No Change	Overall*** and Male* Decrease	Males Reported the Least Change Females Improved	Males Reported the Least Change
Pre-Post Changes (Groups Compared)	No Differences	Persisters Increase; Dropouts Decrease *	Persister Women Decreased More* than Other Women	N/A	N/A
Male-Female Comparisons	Overall** and Dropout^{ns} Males Higher than Overall & Dropout Females on Pretest	No Differences	Females Overall and in All Groups Lower than Males on Pretest and Posttest (except NoShows on Posttest)	Among Persisters and NoShows, More Women than Men^{ns} Started Families	Female Dropouts Reported More Negative Changes than Male Dropouts^{ns}
Summary	Persisters Increased; No Intergroup Differences	Persisters Increased and Dropouts Decreased	Males Reported More Police Involvement than Females; Other Findings are Study Artifacts	Among Males, Persisters, then Dropouts, then NoShows Improved. Among Females, Persisters and NoShows Improved Equally and More than Dropouts	Results were Mixed; See Above

* $p < .05$

** $p < .02$

*** $p < .01$

2.3 Health and Educational Impacts

Variables in this area of study can be divided into those which measure knowledge (Health Information and Nutrition Information) and those which measure behavior (Health Care and Health Habits, Junk Food Ratio, Balanced Diet, Educational Attainment). The matrix of findings appears on the following page (Table 2-3).

On the knowledge scales, the only consistent finding was that women almost always scored higher than men on both the pretest and posttest. There were no differences among or changes within any of the groups, except that NoShows, especially males, improved in Nutrition Information. The lack of improvement of the Job Corps groups indicates that the Job Corps Health Education program had little impact on either Persisters or Dropouts.

The behavior scales yielded more positive results. Female Persisters entered Job Corps with the strongest tendency to choose junk foods over nutritious foods. They were the only group, however, to improve significantly. Persisters, overall, improved on both measures of nutritional behavior, while the other two groups did not.

In the subarea of Health Care and Health Habits, the number of Persisters (particularly women) who had gone to the dentist in the past year increased significantly from pretest to posttest. This change can be attributed to dental care received in Job Corps. Optometry care was not as widespread, as Job Corps participants who thought they needed glasses did not receive them. In fact, more NoShows got glasses between pretest and posttest than either Job Corps group.

The final item in this group was Educational Attainment. It was found that very few youngsters received GED's in Job Corps or were ever enrolled in GED classes. Female Persisters, however, were the most likely to be in those two categories. Women of both groups entered Job Corps with more educational background.

At the time of the posttest, about 30% of the respondents were in school. There were no significant differences by group or sex.

Three conclusions can be drawn:

- Job Corps had significant health benefits for participants, especially women, who stay at least three months.

Table 2-3

Matrix of Findings on Health and Educational Impacts

	Health Information	Health Care & Health Habits	Nutrition Information	Junk Food Ratio	Balanced Diet	Educational Attainment
Pretest Scores (Persisters vs. Dropouts vs. NoShows)	No Differences	No Differences	No Differences	No Differences	No Differences	No Difference Between Persisters and Dropouts in Pre-Job Corps Education
Posttest Scores (Persisters vs. Dropouts vs. NoShows)	No Differences	NoShows had the Strongest Smoking & Drinking Habits^{ns}	NoShow Males Higher than** Other Males	No Differences	No Differences	Female Persisters Took GED classes More than Any Other Group***
Pre-Post Changes Among Persisters	No Change	Overall and Females** Improved in Dental Frequency	No Change	Overall* and Females* Improve	Overall* Increase	N/A
Pre-Post Changes Among Dropouts	No Change	N/A	No Change	No Change	No Change	N/A
Pre-Post Changes Among NoShows	No Change	More NoShows Got Glasses than Any Other Group	Overall* Improve	No Change	No Change	N/A
Pre-Post Changes (Groups Compared)	No Differences	N/A	No Differences	No Differences	No Differences	NoShows Most Likely to Have Returned to School
Male-Female Differences	On the Pretest* and Posttest* Female Persisters Scored Higher than Male Persisters. On the Posttest*** Dropout Females Scored Higher than Dropout Males.	On the Pretest, More Women Wore Glasses or Thought They Needed Them than Men***; More Women than Men were Overweight^{ns}; One-third of the Normal-Weight Women Consider Themselves Abnormal in Figure	On the Pretest, Women Persisters Scored Higher* than Male Persisters	Overall** on Pretest Women Food. Persister Women Choose More Junk Food on the Pre test*** but Improve More* than Men	Dropout Women Lower than* Dropout Men on Posttest	Women Entered with More Education than Men***
Summary	Females Tended to Score Higher No Other Differences or Changes	Females were Most Conscientious about Health and Most in Need of Services	NoShows were the Only Group Which Improved	Women, Particularly Persisters, Chose More Junk Food, but Improve During Job Corps	Persisters Improved; Dropout Women Declined	Women were Most Education-Oriented Before, During and After Job Corps

* $p < .05$
** $p < .02$
*** $p < .01$

- The Health Education program in Job Corps seemed to have little impact in the area of knowledge, although behavioral changes did emerge.
- The availability of GED classes in Job Corps had little relevance to the vast majority of participants, who did not enroll.

2.4 Summary of Findings

In this study Job Corps had a positive impact on a number of non-economic outcomes. Twenty-one different outcomes were measured. Those who remained in Job Corps at least three months improved on eight different outcomes, compared to two for those who dropped out and five for those who did not enroll. Three months or more in Job Corps led to improvement in the following areas:

- Job Seeking Skills
- Job Satisfaction
- Attitude Toward Authority
- Self Esteem
- Criminal Justice System Involvement
- Nutrition Behavior (2 scales)
- Family Relations
- Leisure Time

Job Corps provided benefits in all three areas of non-economic impacts studied: (1) Job-Related Impacts, (2) Social-Attitudinal Impacts, and (3) Health and Educational Impacts. Table 2-4 summarizes these results.

Job Corps has provided substantial non-economic benefits to its participants and to the larger society, according to the present study. Youth who enrolled in Job Corps and stayed at least three months improved in all areas of study, from eating habits to staying out of trouble; from self-esteem to dental care. On almost all outcomes, being in Job Corps at least three months was even more beneficial to women than to men. These impacts make Job Corps participants more employable and benefit the larger society in many ways. It is important to note that these benefits do not accrue to early dropouts. Job Corps must make a concerted effort either to screen out those who seem unlikely to survive the first weeks or to strengthen the program so that more enrollees will remain long enough to benefit. That such benefits are available has been made clear by this study.

Table 2-4

Summary of Results of the Non-Economic Impacts Study

Group Area of Study	Three Months or More in Job Corps (Persisters)	Less Than Three Months in Job Corps (Dropouts)	Did Not Attend Job Corps (NoShows)
Job-Related Impacts			
Job Seeking Skills	Improved	No Change	Improved
Job Holding Skills	No Change	Declined	No Change
Job Knowledge	No Change	Declined	Improved
Work Relevant Attitudes	No Change	Declined	No Change
Work Ethic	No Change	Declined	No Change
Job Skill Confidence	Declined	Declined	No Change
Job Satisfaction	Improved	Improved	Improved
Vocational Aspirations (Right Now)	No Change	No Change	Declined
Vocational Aspirations (Two Years Ago)	No Change	Increased (Declined)	No Change
Vocational Aspirations (Two Years from Now)	No Change	No Change	Declined
Employment Status	Most full-time work	Lowest employment rate	Most steady work
Social-Attitudinal Impacts			
Attitude Toward Authority	Improved	No Change	No Change
Self-Esteem	Improved	No Change	No Change
Criminal Justice System Involvement	Improved	Improved	Improved
Family Relations	Improved	No Change	No Change
Leisure Time	Improved	Mixed	No Change
Health & Education Impacts			
Health Information	No Change	No Change	No Change
Nutrition Information	No Change	No Change	Improved
Health Care & Health Habits	Mixed	No Change	Mixed
Nutrition Behavior (2 scales)	Improved	No Change	No Change
Educational Attainment	Most in GED classes	No Change	Most returned to school

3.0 FINDINGS ON JOB-RELATED NON-ECONOMIC IMPACTS

This area of study contained the largest number of variables, eleven. They cover a number of job-related areas--knowledge of work, attitude toward work, interest in work and employment status. The first three subareas are taught within the Job Corps program both formally and informally. Formal teaching takes place in a course entitled "The World of Work," which is required of all enrollees. The course covers such skills as filling out applications and reading want ads, and offers opportunities to learn how to behave on the job and in a job interview, how to dress, how to handle problems on the job and how to manage money.

Informal education for future jobs takes place in all facets of center life. Vocational instructors often require businesslike dress or behavior. Training classes are usually divided into work crews, with an advanced student as leader. Former graduates sometimes return to the center and describe their work situations.

The following eleven outcomes were chosen to measure the impact of Job Corps experience in these areas. Seven of these were measured by means of scales--groups of items scored as a single measure. The other four variables were scored as individual items. In each case, however, the research questions were the same. They were:

1. Does Job Corps have an impact on this outcome?

This question is answered by means of pre-post comparisons of mean scores of each of the two Job Corps groups (Persisters and Dropouts) and by means of comparing these change scores with change scores of the comparison group (NoShows).

2. Are Job Corps' impacts on this variable different for men and women?

This question is answered by means of comparisons between change scores of males and change scores of females in each group.

3. Do there appear to be patterns of impact on these variables?

This question is answered in the summary discussions of outcomes at the end of the chapter.

Each outcome variable is discussed separately in this chapter, and each is analyzed in the same way, for ease of interpretation. First the outcome is described briefly. Then a table is presented which displays mean pretest scores, posttest scores, and difference scores, separately for males and females within each of the three applicant groups (Persisters, Dropouts, and NoShows). On the far right of each table are the results of t tests of significance. These tests attempt to answer the first research question--to determine whether there was a substantial (significant) change in the mean scores of each of the six groups from pretest to posttest. Asterisks reference t's which are significant at the .05 level or less; the presence of more than one asterisk indicates a higher level of significance. It should be noted that the size of the t statistic required for significance varies based on the sample size of each group and subgroup.

To shed further light on the first research question, F tests have been computed to compare the three groups at the time of pretest and at the time of posttest. An F test has been also made among the difference scores of these groups. Results of these F tests on between-groups differences are reported at the bottom of the table and in the text, with statistical information in parentheses in cases of significance.

To answer the second research question, F tests have been computed to compare mean scores of males and females in each group at pretest and posttest. Again, results are reported at the bottom of the table and in the text.

Answers to the third research question appear in summary discussions. In addition, on some outcomes the results of interscale correlations are reported. In order to avoid overusing the data, these correlations were computed only in cases where associations between two scales were hypothesized a priori.

3.1 Knowledge of Work

Three separate skills were measured which relate to the obtaining and the keeping of a job, behaviors separate from the specific skill involved. These indirect skills are: 1) job seeking skills, the ability to actually look for a job, read ads, fill out an application, and the like; 2) job knowledge, a general level of knowledge about various types of employment including duties, salary, etc., and 3) job holding skills, the knowledge of what to do in order to get along on the job.

These three skills were measured by means of three subscales of the Youth Assessment Battery developed by Norman Freeberg at the Educational Testing Service.

3.1.1 Job Seeking Skills Scale

The purpose of this measure is to assess the respondent's knowledge of the basic skills needed in looking and applying for work. Table 3-1 presents the mean scores for each of the three treatment groups (further broken out by sex) before and after Job Corps. The difference scores, that is the mean difference between the pretest and the posttest scores of each respondent are also shown. The sign of the mean difference score indicates whether there was an overall increase (positive change) or decrease (negative change) in individual scores.

As Table 3-1 indicates, both those who went into the Job Corps and stayed at least three months (Persisters), and those who were accepted but never entered the Corps (NoShows), showed increases in their job seeking skills. In addition, women who dropped out of the Job Corps within the first three months also showed a significant increase in work seeking abilities. The only group in the study population which failed to show an increase in job seeking abilities was the male Dropouts, whose scores on this indicator remained essentially unchanged.

As there were no significant differences among these groups on their pretest scores, it appears that the intervening experiences of both the Persisters and the NoShows had some impact on their ability to seek employment. For the Persisters, one can infer that their Job Corps training gave them this skill. For the NoShows, the hypothesis can be made that they did

Table 3-1

CHANGES IN: JOB SEEKING SKILLS SCALE SCORES

By SEX AND TREATMENT GROUP

Treatment Groups	Mean Pretest Score	Mean Posttest Score	Mean Difference Score (Pretest-Posttest)	N	Difference Score t
Persisters	11.78	12.95	1.17	168	4.81***
Males	11.67	12.78	1.11	100	3.35***
Females	11.94	13.19	1.25	68	3.53***
Dropouts	11.66	12.10	.44	213	1.60
Males	11.66	11.81	.14	119	.76
Females	11.65	12.47	.82	94	2.07*
Noshows	12.00	13.33	1.33	75	3.39***
Males	12.19	13.44	1.26	43	2.09*
Females	11.75	13.19	1.44	32	3.17***

Possible range: 0-17

Significant F tests: Across groups on the posttest (overall and males) F=5.97***

$^{*}p < .05$

$^{**}p < .02$

$^{***}p < .01$

not show up for Job Corps training because they chose instead to look for a job, and that looking increased their job seeking skills almost as much as being in Job Corps for at least three months would have. Male Dropouts did not improve; they apparently did not spend enough time either in Job Corps or in the labor market to reap the gains that Persisters and No-Shows did. Female Dropouts, on the other hand, were able to learn from their mixed experience.

3.1.2 Job Holding Skills Scale

This scale is part of the Youth Assessment Battery and was designed to measure the extent to which the respondent was aware of certain skills and possessed attitudes which were conducive to positive employee/employer relationships. These things included relationships with the boss and with fellow employees, punctuality, and willingness to do a little extra on the job.

Table 3-2 shows the mean scores on the pretest and posttest administrations of this scale as well as the mean change scores for each of the three groups, separately for males and females. Analysis of variance indicated that the three test groups were the same in their pretest scores ($F=0.27, df= 2/465, p = \, > .10$). They were also not significantly different in their posttest scores nor in their difference scores. While the scores of Persisters and NoShows did not change, the Dropouts did show a small but significant decline in job holding skills between the pretest and the posttest.

It is likely that the major reason that little or no change was observed on this scale is that the pretest scores were very close to the maximum. The average score on the Job Holding Skills scale across all applicants was 30.18, less than three points under the highest possible score, leaving little room for improvement. In fact, the lack of significant decline on the part of the Persisters is a positive finding for Job Corps, under the circumstances.

Table 3-2

CHANGES IN: JOB HOLDING SKILLS SCALE SCORES

By SEX AND TREATMENT GROUP

Treatment Groups	Mean Pretest Score	Mean Posttest Score	Mean Difference Score (Pretest-Posttest)	N	Difference Score t
Persisters	30.21	30.12	-0.09	167	.39
Males	30.12	29.85	-0.27	102	.80
Females	30.35	30.53	-0.18	65	.57
Dropouts	30.19	29.65	-0.55	219	2.37*
Males	29.87	29.35	-0.52	124	1.83
Females	30.61	30.04	-0.58	95	1.52
Noshows	30.22	30.17	-0.05	74	.13
Males	30.34	30.14	-0.19	42	.43
Females	30.08	30.22	0.14	32	.25

Possible range: 11-33

Significant F tests: Between sexes on the pretest (Dropouts only) $F = 7.4^{***}$
Between sexes on the posttest (overall) $F=4.41^{**}$

$^{*}p < .05$

$^{**}p < .02$

$^{***}p < .01$

3.1.3 Job Knowledge Scale

The determination of whether Job Corps had an impact on this outcome is difficult to make at first glance. Male-female differences at the time of the pretest complicate the interpretation of the pre-post difference scores. For the Persisters, women had significantly higher scores than men at both pretest and posttest and neither group changed significantly. For the the Dropouts, women had significantly higher scores at pretest only, because the women declined and the men did not change. It thus can be concluded that Job Corps did not have an impact on this outcome.

The NoShows, however, did improve significantly in job knowledge. Males and females began at the same level and increased about the same amount. In the small study sample, the difference is that being in the labor market has a positive impact and being in Job Corps does not.

The lack of improvement among Job Corps women can perhaps be attributed to a ceiling effect in the scale. As in the case of the job holding skills scale, the fact that the Persister women did not decline is a positive finding for Job Corps, under the circumstances. It is also possible to attribute the lack of improvement among Job Corps men to a similar ceiling effect. The fact that NoShows were able to improve despite the ceiling effect, however, indicates that being in the labor market had a powerful impact on job knowledge.

3.1.4 Summary

On the knowledge of work cluster of three scales, Job Corps appeared to have a positive impact only on job seeking skills, and only those who remained at least three months were so impacted. Being in the labor market during the same period of time, however, was associated with significant improvement on two scales, Job Seeking Skills and Job Knowledge. These two are the scales in the cluster which test factual knowledge rather than awareness of appropriate behavior. Scores on the Job Holding Skills scale did not improve for any group because of a ceiling effect within the scale. It can thus be concluded that youngsters who apply to Job Corps know how to behave on the job, but only those who remain in the labor market or

Table 3-3

CHANGES IN: JOB KNOWLEDGE SCALE SCORES

By SEX AND TREATMENT GROUP

Treatment Groups	Mean Pretest Score	Mean Posttest Score	Mean Difference Score (Pretest-Posttest)	N	Difference Score t
Persisters	20.61	20.62	-0.08	163	0.24
Males	20.09	19.95	-0.21	98	0.44
Females	21.41	21.59	0.12	65	0.34
Dropouts	20.87	20.29	-0.70	222	2.03*
Males	20.09	19.90	-0.30	129	0.71
Females	21.92	20.79	-1.24	93	2.17*
Noshows	20.60	21.59	0.93	73	2.15*
Males	20.60	21.50	0.90	41	1.97
Females	20.59	21.71	0.97	32	1.21

Possible range: Male - 0-25
Female - 0-27

Significant F tests: Across groups on the posttest (males only) $F = 3.56^{*}$
Across groups on difference scores (overall & Females) $F=3.64^{*}/3.36$)
Between sexes on the pretest (Persisters and Dropouts only) $F = 7.41^{***}$ AND 15.27^{***}
Between sexes on the posttest (Persisters only) $F = 7.30^{***}$

$^{*}p < .05$

$^{**}p < .02$

$^{***}p < .01$

spend at least three months in Job Corps improve their factual knowledge. Spending a short period of time in Job Corps and then returning to the labor market is a pattern which reduces chances of improvement in the area of knowledge of work.

Male-female differences appeared on the Job Knowledge Scale, where both Persister and Dropout women entered Job Corps with a better background than the men. These differences must be interpreted with caution; however, this scale contains different items for men and women.* It can be concluded only that the women knew more about "female jobs" than the men knew about "male jobs."

3.2 Attitudes Toward Work

In this section, we examine the impact which Jobs Corps training appears to have had on young peoples' attitudes concerning work and the work ethic. Two scales were used to measure these potential impacts. The first, Regis Walther's Work Relevant Attitudes Scale** taps three separate types of work related attitudes. These are described by the scale's author as "Optimism," "Self-confidence" and "Unsocialized Attitudes." The second scale, the Work Ethic Scale (from Goodwin's Work Orientation Questionnaire***) attempts to assess the extent to which the respondent perceives that work advances his or her self-development and that such efforts will lead to success.

3.2.1 Work-Relevant Attitudes Scale

The results of the pre- and posttests and analysis of the changes in scores are presented in Table 3-4. While there were no significant differences among the three groups at pretest, across all the groups

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*The Job Knowledge Scale for women also contains two more items than the scale for men. However, the number of items has been normalized here to make the two scores directly comparable.

**Walther, R.H. The Measurement of Work Relevant Attitudes, Washington, D.C.: Manpower Research Projects, The George Washington University, 1975. NTIS Document No. PB 246260.

***Goodwin, L. Do the Poor Want to Work? A Social-Psychological Study of Work Orientations, Washington, D.C.: The Brookings Institution, 1972.

Table 3-4

CHANGES IN: THE WORK RELEVANT ATTITUDES SCALE SCORES

By SEX AND TREATMENT GROUP

Treatment Groups	Mean Pretest Score	Mean Posttest Score	Mean Difference Score (Pretest-Posttest)	N	Difference Score t
Persisters	55.73	54.53	-1.19	153	1.30
Males	55.91	54.23	-1.69	90	1.36
Females	55.46	54.97	-0.48	63	.35
Dropouts	55.70	53.45	-2.26	197	3.12**
Males	56.56	53.06	-3.50	107	3.34***
Females	54.69	53.91	-0.78	90	.81
Noshows	56.77	54.86	-1.91	72	1.36
Males	57.37	56.27	-1.09	41	.78
Females	55.99	53.00	-2.99	31	1.37

Possible range:

$^{*}p < .05$
$^{**}p < .02$
$^{***}p < .01$

Table 3-5

CHANGES IN: WORK ETHIC SCALE SCORES

By SEX AND TREATMENT GROUP

Treatment Groups	Mean Pretest Score	Mean Posttest Score	Mean Difference Score (Pretest-Posttest)	N	Difference Score t
Persisters	49.97	49.37	0.40	157	.79
Males	48.36	49.35	0.99	95	1.43
Females	49.92	49.41	-0.51	62	0.70
Dropouts	49.01	47.51	-1.50	204	2.64***
Males	48.47	47.88	-0.59	108	0.70
Females	49.62	47.10	-2.52	96	3.47***
Noshows	48.76	48.21	-0.55	76	0.68
Males	48.03	47.95	-0.07	43	0.06
Females	49.71	48.54	-1.17	33	1.05

Possible range: 15-60

Significant F tests: Across groups on the posttest (overall and women) F=4.13**/3.31*
Between sexes on the pretest (overall) F=7.33***

$^{*}p < .05$
$^{**}p < .02$
$^{***}p < .01$

there was a consistent, though not always statistically significant, drop in the level of work relevant attitudes between the pre- and posttest. This drop indicates a general decline in optimism and self-confidence among these young people. Over the entire group of respondents, this decline is significant (t=3.41; df=421; p<.001).

The greatest decline in job related attitudes came from those young people who attended the Job Corps for less than 3 months and dropped out before finishing their training. The decline is a reflection of the substantial decrease on the scale by males; the decline among Dropout females was not significant. While there was a general drop in job related optimism across this entire group of young people, this one subgroup of men who spent a short time in Job Corps and then re-entered the job market without having acquired further skills was most strongly affected. This differential may indicate that a failure to complete the Job Corps training program (or even to last more than 3 months) was one more failure to these young men, and that such a premature termination may have a substantial negative impact on attitudes. The overall decline in optimism is also reflected in the respondents' estimations of their situations in two years (see Section 3.3.3). Perhaps the high post-program unemployment rate experienced by all groups (see Section 3.4) tempered their enthusiasm. It can be concluded that Job Corps had impact only on male early Dropouts, and that its impact was negative. Job Corps had no significant impact on women's scores on this scale.

3.2.2 Work Ethic Scale

While all three groups showed statistically similar scores on the Work Ethic Scale in the pretest results (see Table 3-5), changes between the pre- and posttests were almost significantly different (p <.06). Again, as with the Work Relevant Attitudes Scale, there was a drop in overall level of work ethic, with the exception of the Persister males, whose scores increased slightly. The greatest drop occured among the Dropout women. Again, the indications are that among those who persist in their Job Corps training, the benefits are the greatest, and those who fail to complete even three months run the greatest risk of major declines in general orientation towards work.

3.2.3 Lack of Job Skill Confidence Scale

A fifth non-economic but job related area which was examined was the degree to which the participants felt confident that they could succeed in the job market. This dimension was measured by Goodwin's "Lack of Confidence in Ability to Succeed in the World of Work Scale" (Lack of Confidence Scale). A positive change on this scale indicates a decline in confidence.

As Table 3-6 indicates, there was a decline across all of the respondents on their general level of job skill confidence, especially among the two Job Corps groups. Such changes reflect a belief that getting ahead in a job is largely a matter of luck rather than skill or hard work. Thus, the "confidence" label may be somewhat misleading. The increase in scores may simply reflect the impact which Job Corps had on the enrollee's sense of reality. For the males, the experience may have convinced them that luck is an important part of being really successful.

Indeed, as Table 3-7 shows, there were three items which accounted for the greatest amount of the difference between the two Job Corps groups and the NoShows. At least on the surface, none of these three items seems to reflect a lack of confidence but rather an acceptance of a specific point of view towards success -- that one must do or believe in certain things in order to be successful. These items reflect the belief that success mainly involves:

- Knowing the right people;
- Caring about making money; and,
- Having people like you

The indication is, then, that such values were, to some extent, transmitted either directly or indirectly to male Job Corps participants, whether they remained for three months or more or whether they dropped out prematurely. Women did not change their attitudes while in Job Corps, however.

Table 3-6

CHANGES IN: LACK OF JOB SKILL CONFIDENCE SCALE SCORES

BY SEX AND TREATMENT GROUP

Treatment Groups	Mean Pretest Score	Mean Posttest Score	Mean Difference Score (Pretest-Posttest)	N	Difference Score t
Persisters	20.13	21.80	1.67	155	1.74***
Males	20.18	22.39	2.20	93	3.60***
Females	20.05	20.92	0.87	62	1.38
Dropouts	20.53	21.27	0.75	203	2.24*
Males	20.32	21.67	1.35	109	2.68***
Females	20.77	20.81	0.04	94	0.10
Noshows	20.63	21.04	0.41	74	0.74
Males	19.93	20.45	0.52	42	0.78
Females	21.54	21.81	0.27	32	0.28

Possible range:

Significant F tests: Between sexes on difference scores (Dropouts only) $F=3.89^{*}$

$^{*}p < .05$

$^{**}p < .02$

$^{***}p < .01$

Table 3-7

Change Scores for Confidence Scale Items for Male Respondents

Item #	Item	Mean Score Changes		
		Persisters	Dropouts	Noshows
E3	Success in an occupation is mainly matter of knowing the right people.	.27	.19	-.10
E8	Success in an occupation is a matter of luck.	.21	.26	.20
E12	In order to get ahead in a job you need to have some lucky breaks	.34	.14	.42
E16	I like kind of work you can forget about	.13	.06	.05
E19	To be really successful in life you have to care about making money.	.20	-.08	-.29
E20	In order to be successful in a job, people have to like you.	.24	.27	.03
E22	To me, work is nothing more than a way of making a living.	.06	-.02	-.01
E23	The most important part of work is making good money.	.12	-.02	.14

3.2.4 Summary

On the three scales which form the attitudes toward work sub-area, the impact of Job Corps was negative for males who dropped out early; their attitudes toward work became more negative on two of the three scales. Interestingly, female Dropouts became more negative only on the scale which did not change for male Dropouts.

For men and women who stayed at least three months, Job Corps seemed to have no impact, positive or negative. In this stability they are joined by the NoShows, who recorded no significant changes from pretest to posttest. These findings can be interpreted as follows: Attitudes toward work are not easily changed over a ten month period. If, however, a young person makes a commitment to improve his or her work skills and then does not follow through with it or does not like the program, this negative experience can have a significant negative impact on attitudes toward what does and what does not help a person get ahead in the job market. Remaining in Job Corps, on the other hand, allows a young person to retain his or her initial positive attitudes toward work.

3.3 Interest in Work

This third sub-area of job-related non-economic impacts covers two topics--job satisfaction and vocational aspirations. Unlike the previous outcomes, these were measured by means of single item responses. Job satisfaction items were also aggregated into a scale. The purpose of examining these outcomes was to determine whether the experience of attending Job Corps impacted satisfaction with current work conditions and plans to achieve success in a vocational area.

A problem in interpretation in this sub-area lies in the fact that it is impossible to know whether a respondent who reported greater job satisfaction actually had a better job at the time of the posttest. Perhaps he or she became more satisfied with a poor-paying job because he or she was planning to return to school shortly.

3.3.1 Job Satisfaction

Job satisfaction was assessed by means of four items which were developed specifically for this study. Respondents were asked to rate their current job (or, if they did not have a current job, their previous job) on four aspects: the pay, the level of interest, the chance for promotion, and the boss. Each item was rated on a scale of 1 to 4. The higher the number, the more positive the rating of the job element. Below we describe the responses to each item, as well as on the job satisfaction scale derived from combining these four items. It should be noted that youngsters who had never worked were instructed to skip this section. The sample size, therefore, is smaller than for other outcomes. A summary of findings on these five instruments follows in Table 3-8; complete tables of findings for each item are displayed in Tables 3-9 to 3-12, at the end of Section 3.3.1.

Pay

As Table 3-9 reveals, the three respondent groups started at approximately the same pretest baseline level on the pay item and increased significantly. There were no significant differences on the change scores, either among groups or between sexes. This item appears not to discriminate, i.e., all six groups formed by combining sex and Job Corps status increased their ratings of their job pay between pre- and posttest. Mean ratings for all groups began at between one (lowest rating) and two on the scale; all groups averaged between two and three on the posttest.

Level of Interest

Almost the same pattern prevailed on the interest ratings as on the pay item ratings, as Table 3-10 reveals. All three respondent groups were at approximately the same baseline level, and the change score ratings of all three groups reached significance. For the NoShows, however, the males accounted for that group's significant improvement, and only the overall score for Dropouts was significant. It can therefore be concluded that only within the Persister group did level of interest increase substantially for both men and women. Interestingly, both male and female Persisters scored the lowest on this item both times. Perhaps their higher standards induced them to stay longer in Job Corps, after which their scores increased more than those of the other groups.

Table 3-8

SUMMARY OF JOB SATISFACTION FINDINGS

Finding	Pay	Level of Interest	Chance for Promotion	The Boss	Overall Job Satisfaction Scale
Pretest scores (Persisters vs. Dropout vs. NoShows)	ns	Persisters a bit lower ^{ns}	Persisters a bit lower^{ns}	Persisters a bit lower^{ns}	Persisters a bit lower^{ns}
Posttest scores as above	ns	Persisters a bit lower^{ns}	Persisters a bit lower^{ns}	Persisters a bit lower^{ns}	ns
Pre-post changers - Persisters	Males*** and females** improve	Males* and females*** improve	Overall*** and Males*** improve	Males*** and females* improve	Males*** and females*** improve
Pre-post changers - Dropouts	Males* and females* improve	Overall improve**	ns, but post-test means higher	Overall*** and males*** improve	Males** and females* improve
Pre-post changes - NoShows	Males** and females* improve	Overall improve***	Overall* and females* improve	Overall*** and females* improve	Males* and females*** improve
Pre-post changes (Persisters vs. Dropouts vs. NoShows)	All improve^{ns}	All improve^{ns}	All improve^{ns}	All improve^{ns}	All improve^{ns} but Persisters appear to improve the most^{ns}

* $p < .05$

** $p < .02$

*** $p < .01$

ns = no significant difference

Table 3-9

CHANGES IN: PAY RATING SCALE SCORES

By SEX AND TREATMENT GROUP

Treatment Groups	Mean Pretest Score	Mean Posttest Score	Mean Difference Score	N	Difference Score t
Persisters	1.70	2.34	0.65	96	4.23 ***
Males	1.64	2.36	0.72	61	3.49 ***
Females	1.80	2.31	0.51	35	2.54 **
Dropouts	1.93	2.39	0.47	122	3.59 ***
Males	1.93	2.32	0.39	71	2.29 *
Females	1.92	2.49	0.57	51	2.84 ***
Noshows	1.86	2.40	0.54	57	3.31 ***
Males	1.94	2.40	0.46	35	2.47 **
Females	1.73	2.41	0.68	22	2.19 *

Possible range: 1-4

*$p < .05$
**$p < .02$
***$p < .01$

Table 3-10

CHANGES IN: INTEREST RATING SCALE SCORES

By SEX AND TREATMENT GROUP

Treatment Groups	Mean Pretest Score	Mean Posttest Score	Mean Difference Score	N	Difference Score t
Persisters	1.42	1.96	0.53	95	3.90 ***
Males	1.45	1.85	0.40	60	2.29 *
Females	1.37	2.14	0.77	35	3.49 ***
Dropouts	1. 77	2.14	0.36	124	2.56 **
Males	1.72	2.07	0.35	72	1.74
Females	1.83	2.21	0.39	52	1.96
Noshows	1.72	2.23	0.51	57	2.96 ***
Males	1.77	2.23	0.46	35	2.36 *
Females	1.64	2.23	0.60	22	1.81

Range = 1-4

*p= $< .05$
**p= $< .02$
***p= $< .01$

Chance for Promotion

Although there were no significant differences among groups on the pretest or the posttest, both male and female Dropouts began with the highest rankings but did not improve on the posttest. In contrast, Persisters and NoShows recorded significant overall increases in their estimates of the chance for promotion. This inter-group difference implies that attending Job Corps for at least three months or remaining in the labor market has an impact on perceived chances for promotion, and Job Corps matters more. Spending a short period in Job Corps and a short period in the labor market, however, does not have similar positive impacts.

It should be pointed out that the two groups that improved significantly (Persister males and NoShow females) recorded the lowest estimates on the pretest. Their changes may be cases of regression toward the mean as much as anything else.

The Boss

Ratings of the boss were lowest of the four items and were about the same at pretest and posttest for all three respondent groups. The ratings increased significantly overall between pretest and posttest for all three respondent groups (see Table 3-12), although only among Persisters did both male and females increase. The two groups which did not change (Dropout females and NoShow males) had the highest scores on the pretest. They may have kept (or returned to) those good jobs and therefore did not increase markedly in their assessments. Persisters had the lowest assessment of their bosses on both the pretest and the posttest, although significant change did take place. As in the case of level of interest, higher standards among Persisters may have been responsible.

Job Satisfaction Scale

The four item ratings were summed into a Job Satisfaction Scale. On this "scale," the three groups were similar to each other at pretest and at posttest. All six groups manifested significant change on the combined scale between pretest and posttest (see Table 3-13). Persisters,

Table 3-11

CHANGES IN: CHANCE FOR PROMOTION RATING SCALE SCORES

By SEX AND TREATMENT GROUP

Treatment Groups	Mean Pretest Score	Mean Posttest Score	Mean Difference Score	N	Difference Score t
Persisters	1.92	2.52	0.600	95	3.50 ***
Males	1.75	2.50	0.750	60	3.56 ***
Females	2.20	2.54	0.343	35	1.17
Dropouts	2.37	2.64	0.264	121	1.68
Males	2.33	2.51	0.186	70	0.88
Females	2.43	2.80	0.373	51	1.59
Noshows	2.14	2.60	0.466	58	2.36 *
Males	2.25	2.56	0.306	36	1.30
Females	1.96	2.68	0.727	22	2.08 *

Range = 1-4

*p=< .05
**p=< .02
***p=< .01

Table 3-12

CHANGES IN: BOSS RATING SCALE SCORES

By SEX AND TREATMENT GROUP

Treatment Groups	Mean Pretest Score	Mean Posttest Score	Mean Difference Score	N	Difference Score t
Persisters	1.31	1.81	0.51	95	3.87 ***
Males	1.30	1.85	0.55	60	3.29 ***
Females	1.31	1.74	0.43	35	2.04 *
Dropouts	1.54	2.12	0.58	122	4.49 ***
Males	1.49	2.27	0.78	71	4.55 ***
Females	1.61	1.92	0.31	51	1.61
Noshows	1.49	2.00	0.51	57	2.89 ***
Males	1.63	1.97	0.34	35	1.61
Females	1.27	2.05	0.77	22	2.45 *

*p < .05
**p < .02
***p < .01

Scale: 1 = lowest;
4 = highest

Table 3-13

CHANGES IN: JOB SATISFACTION SCALE SCORES

By SEX AND TREATMENT GROUP

Treatment Groups	Mean Pretest Score	Mean Posttest Score	Mean Difference Score	N	Difference Score t
Persisters	6.25	8.59	2.34	93	4.68 ***
Males	5.98	8.50	2.52	58	3.68 ***
Females	6.69	8.74	2.06	35	2.91 ***
Dropouts	7.66	9.29	1.63	120	3.48 ***
Males	7.57	9.17	1.61	69	2.59 **
Females	7.78	9.45	1.67	51	2.30 *
Noshows	7.25	9.26	2.03	57	3.63 ***
Males	7.66	9.20	1.54	35	2.42 *
Females	6.59	9.36	2.77	22	2.70 **

Range = 4-16

*P=< .05
**P=< .02
***P=< .01

although they improved the most, began with the lowest ratings and ended with the lowest ratings. This finding can be interpreted in one of two ways:

- Persisters were most strongly motivated to stay in Job Corps because of previous bad experiences on the job, and were the most cautious of the groups in rating their post program jobs.
- Persisters' jobs before and after the program were not any worse than those of other groups, but these youth's standards began high and remained high.

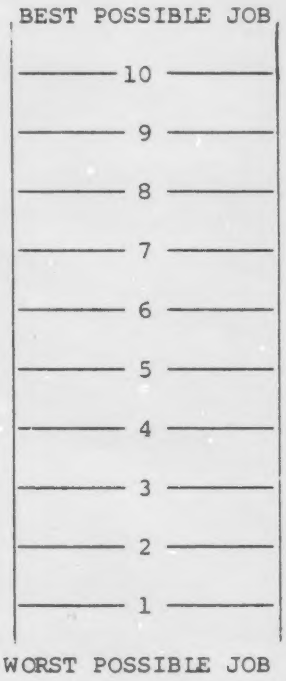
In the absence of information about actual pre-program and post-program jobs of the three groups, conclusions regarding these items and this scale cannot be reliably drawn. That Persisters improved the most is, however, a positive finding for Job Corps.

3.3.2 Vocational Aspirations

An attempt was made to ascertain the respondents' perceptions of their job standing by asking them to rate their job status as of two years ago, now, and two years in the future. The ratings were made on a ten-rung "Ladder of Life" scale, as shown below. In the sections below we examine the results for each item. A summary of findings on these three items follows in Tables 3-14 and 3-15. Individuals tables 3-16 to 3-18 are placed at the end of Section 3.3.

The items were worded as follows:

To the right is a picture of a ladder. Suppose we say that the top of the ladder represents the BEST POSSIBLE JOB for you and the bottom now represents the WORST POSSIBLE JOB for you.



Where on the ladder do you feel you personally stand right now?

____
(Enter step number)

Where on the ladder would you say you stood two years ago?

____
(Enter step number)

Where do you think you will be on the ladder two years from now?

____
(Enter step number)

Table 3-14

SUMMARY OF LADDER OF LIFE FINDINGS

	"Where do you stand right now?"	"Where did you stand two years ago?"	"Where will you stand two years from now?"
Pretest scores (Persisters v. Dropouts v. No Shows)	Female Persisters and Dropouts both lower^{ns} than female NoShows; males^{ns}	Female Persisters and Dropouts both lower^{ns} than female NoShows; males^{ns}	Female NoShows score highest^{ns}
Posttest scores (Persisters v. Dropouts v. No Shows)	Female Persisters and Dropouts both higher* than female NoShows; males^{ns}	ns	Both male and female Persisters and Dropouts score higher^{ns} than NoShows
Pre-post changes Persisters	Improve a bit, mostly males^{ns}	Improve a bit, mostly females^{ns}	Females slightly lower^{ns}
Pre-post changes Dropouts	Improve a bit, mostly females^{ns}	Both males and females improve *	Males slightly lower^{ns}
Pre-post changes No Shows	Males unchanged; females significantly lower ***	Males unchanged; females lower	Males lower^{ns} females significantly lower ***
Pre-post changes (Persisters v. Dropouts v. No Shows)	Persister males improve^{ns} versus other males; No Show females significantly lower*** versus other females	Persisters and Dropouts improve^{ns} versus No Shows	All groups score lower^{ns}, but No Shows^{ns} and female No Shows *** show more negative change than any other group

Table 3-15

Mean Ladder of Life Rating Scores by Treatment Group

	"Two Years Ago"		"Right Now"		"Two Years from Now"	
Treatment Groups	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
Persisters	4.11	4.33	5.64	6.02	8.68	8.61
Dropouts	3.98	4.55	5.63	5.94	8.53	8.30
NoShows	4.33	4.20	5.71	5.04	8.82	7.73

Possible range: 1-10

Perceived Job Status "Two Years Ago"

It is important to remember that, in most cases, a decrease in perception of job status two years ago represents an increase in aspirations. Since these youth were unlikely to have had good jobs in the past, a decrease in perception would have represented a realization of this. If, on the other hand, the respondent had been unemployed since Job Corps, previous jobs might have looked better by comparison, thus yielding an increase in perception. It appears as if both formulations are applicable in this case, as there was a significant negative correlation of posttest scores with being employed at the time of the posttest. This means that those who were working were likely to see previous jobs at a lower level than those who were not working.

There were no overall differences among groups on the pretest or the posttest. Dropouts as a group increased their perceptions of their previous jobs signficantly. It is not surprising that Dropout males and NoShow females recorded the highest perceptions, since they were the most likely to have been unemployed at the time of the posttest.

It can be concluded that Job Corps did not increase the aspirations of those who had been enrolled. In fact, only NoShow women decreased their perceptions. They began at a much higher level than the other groups, however. Perhaps their sense of already doing well in the job market was what kept them from enrolling. Ten months (and much unemployment) later, their perceptions had "come down to earth" somewhat. There is a possiblity that this decline only reflects regression toward the mean, however.

Perceived Job Status Right Now

Regarding job status right now, it is difficult to interpret increases and decreases. If the youth was indeed working at a better job than at the time of the pretest, an increase in perception would have been warranted. If the youth was not working at a better job than previously, a decrease in perception would have indicated higher aspiration. There is, unfortunately, no way to validate these findings because no objective data on job quality was provided. Two correlations, however, of posttest "right now" scores with posttest employment status were significantly positive, an indication that those who were working perceived themselves as higher on the ladder than those who were not working.

In the present study only NoShow women changed their scores. They decreased their perceptions from the highest of any group to the lowest. The same interpretation as in the case of "two years ago" can be made: The women failed to enroll in Job Corps because they were satisfied with their current jobs. By the time of the posttest, they were not nearly so satisfied.

Perceived Job Status in Two Years

On this measure the assumption would ordinarily be that those who raised their scores from pretest to posttest also raised their vocational aspiration. In this study, however, a ceiling effect was operating which prevented significant increases from manifesting themselves. As in the case of current job status, NoShow women scored the highest of any group on the pretest and declined significantly from pretest to posttest. Here the interpretation is more or less the same as has been made previously: No Show women were far less optimistic about their situations after ten more months in the labor market.

Because of the presence of the ceiling effect, it is not surprising that slight decreases were recorded. The fact that the Job Corps groups stayed stable is a positive finding for Job Corps, under the circumstances.

3.3.3 Summary -- Interest in Work

Job Corps seems to have had a positive impact on those who stayed at least three months. Although they consistently rated aspects of their jobs somewhat lower than did other groups, their improvement was also most consistent.

The vocational aspirations scale is difficult to interpret without other data on post-program employment. However, the change in the scores on the three items for the entire sample is a rather interesting one, as seen in the summary table provided (Table 3-15). Whereas the mean rating on the pretest changed from about 4.1 to about 5.6 between "Two Years Ago" and "Right Now," it jumped an optimistic three points (to about 8.6) between "Right Now" and "Two Years from Now." This suggests an overall optimistic future perception by the sample at the time of the pretest, an agreement that things will be much better in the future.

The "Two Years from Now" findings suggest that Job Corps Persisters remained optimistic about their prospects after Job Corps, while the Dropout males and especially the NoShows demonstrated a more pessimistic prospect. Such a conclusion can be drawn despite the operation of the ceiling effect.

Table 3-16

CHANGES IN: "WHERE DID YOU STAND TWO YEARS AGO?" LADDER OF LIFE RATING

BY SEX AND TREATMENT GROUP

Treatment Groups	Mean Pretest Score	Mean Posttest Score	Mean Difference Score	N	Difference Score t
Persisters	4.11	4.33	0.23	123	0.72
Males	4.23	4.28	0.07	71	0.12
Females	3.94	4.40	0.46	52	1.08
Dropouts	3.98	4.55	0.57	161	2.24*
Males	4.16	4.77	0.61	93	1.68
Females	3.74	4.25	0.52	68	1.49
Noshows	4.33	4.20	-0.07	59	0.17
Males	3.33	3.76	0.46	33	0.89
Females	5.27	4.54	-0.73	26	1.14

Possible range: 1-10

Significant F tests: Between sexes on the pretest (NoShows only) F=6.2**

*p=< .05
**p=< .02
***p=< .01

Table 3-17

CHANGES IN: "WHERE DO YOU STAND RIGHT NOW?" LADDER OF LIFE RATING

BY SEX AND TREATMENT GROUP

Treatment Groups	Mean Pretest Score	Mean Posttest Score	Mean Difference Score	N	Difference Score t
Persisters	5.64	6.02	0.38	126	1.40
Males	5.71	5.99	0.23	72	0.71
Females	5.56	6.07	0.52	54	1.41
Dropouts	5.63	5.94	0.31	162	1.26
Males	5.86	5.88	0.02	93	0.07
Females	5.31	6.01	0.70	69	1.80
Noshows	5.71	4.95	-0.633	60	1.57
Males	5.32	5.24	-0.06	34	0.10
Females	6.15	4.82	-1.54	26	3.22***

Possible range: 1-10

Significant F tests: Across groups at posttest (overall and women) F=4.71***/3.74**
Across groups on difference scores (women only) F=5.94***
Between sexes on difference scores (NoShows only) F=4.08*

Table 3-18

CHANGES IN: "WHERE WILL YOU STAND TWO YEARS FROM NOW?" LADDER OF LIFE
By SEX AND TREATMENT GROUP

Treatment Groups	Mean Pretest Score	Mean Posttest Score	Mean Difference Score	N	Difference Score t
Persisters	8.68	8.61	-0.07	119	0.30
Males	8.54	8.63	0.09	67	0.27
Females	8.87	8.60	-0.27	52	0.94
Dropouts	8.53	8.30	-0.23	161	1.18
Males	8.70	8.32	-0.38	93	1.47
Females	8.31	8.28	-0.03	68	0.10
NoShows	8.82	7.73	-1.08	60	3.09***
Males	8.36	7.64	-0.73	33	1.40
Females	9.37	7.85	-1.52	27	3.42***

Possible range: 1-10

Significant F tests:
Across groups on the pretest (overall and women) F = 3.56*/3.26**
Across groups of difference (overall and women) F = 3.49*/4.11**
Between sexes on the pretest (NoShows only) F = 6.06

*p=< .05
**p=< .02
***p=< .01

3.4 Employment Status

The focus of the present study was on the noneconomic impacts of Job Corps training. Nevertheless, during the posttest, respondents were also asked whether or not they were currently employed (full- or part-time) and the number of months they had worked either full- or part-time since their Job Corps termination. In the case of NoShows, the period asked about was since they had applied for the Job Corps. Three variables were derived from the employment items.

3.4.1 Employment Status at Posttest

The first variable was simply whether or not the respondent was employed full- or part-time at the time of the posttest interview. Table 3-19 presents the employment status of the three groups at the time of the follow-up interview.

Table 3-19

Employment Status At Time of Follow-up Interview
By Job Corps Status
(in percentages)

	Currently Employed Full-Time	Currently Employed Part-Time	Not Employed
Persisters	21	5	74
Male	22	7	71
Female	19	3	79
Dropouts	12	9	79
Male	11	8	81
Female	13	10	77
NoShows	17	10	73
Male	23	15	63
Female	10	3	87

There are no statistically significant differences among the three groups (X^2=6.88; df=4; p=ns). However, the table shows that while the unemployment rate was approximately equal for the three groups, a greater percentage of the employed Persisters were working full-time (approximately 80%) than of the employed Dropouts (57%) or of the employed NoShows (63%). While the numbers are too small to be highly reliable, there is an indication that the employment found by the Persisters tended to be more full time than that found by either the NoShows or the Dropouts. This is particularly notable in contrast to the NoShows, who had much more time to seek a full-time job. In any case, there is no evidence here to suggest that NoShows or Dropouts failed to enroll in or terminated from Job Corps in order to accept full-time employment.

In terms of male-female differences, there appear to be none in either the Persister or the Dropout groups. However, there is a suggestion that NoShow women found it harder to get a job--either full- or part-time --than their male counterparts. At the time of the interview, more than one-third (38%) of the NoShow males were employed, compared with only 13% of the NoShow women. Neither the differences among all of the groups $X^2=15.07$; df=10; NS) nor between male and female NoShows were statistically significant ($X^2=5.60$; df=s; NS). Nevertheless, given that women traditionally find it harder than males to get full-time work, it may be that the Job Corps experience brought the women in the Persister and Dropout groups up to the employment levels of their male counterparts, whereas without Job Corps, their chances for employment would have been substantially less. Findings in Section 2.1 indicated that Job Corps women did not improve in job-related attitudes and skills any more than NoShow women. The higher employment rate of Job Corps women may have been related to the vocational training received.

3.4.2 Amount of Time Employed Since Job Corps

The second employment variable looked at was the amount of time the respondent was employed, full time and part time, between the end of the Job Corps experience and the follow-up interview. As is shown in Table 3-20, the NoShows, on the average, reported being employed two and a half times as long as the Persisters and nearly three and a half times as long as the Dropouts. Most of this difference, of course, was expected, since the NoShows had been in the job market considerably longer than either the Dropouts or the Persisters. What was not expected, however, was the vast differences between men's and women's employment experience. In the two Job Corps groups women worked more than men, both full time and part time, while the opposite was true for NoShows. Furthermore, despite their longer time in the labor market, NoShow women did not work significantly more than Job Corps women. What this may mean is that Job Corps gave the women in this sample skills which made them highly employable, skills that NoShows did not gain. Men, on the other hand, took longer to re-enter the labor market successfully. By the time of the posttest, however, Persister men were more likely than Persister women to be working and almost as likely as NoShow men.

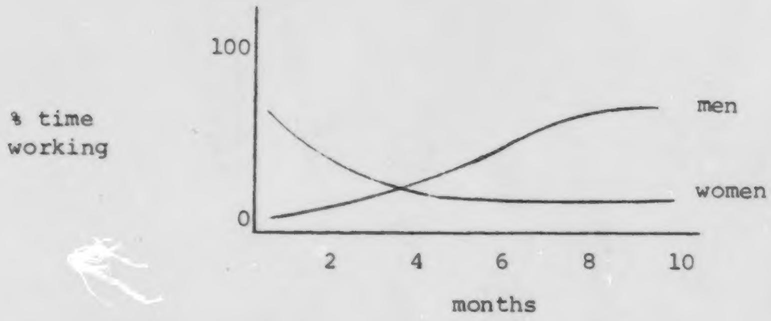
Table 3-20

	Months Worked Full-Time	Months Worked Part-Time
Persisters	1.101	.500
Males	.936	.418
Female	1.333	.615
Dropouts	.815	.536
Males	.754	.452
Females	.896	.646
NoShows	2.771	1.215
Males	3.489	1.444
Females	1.824	.912
	Males: F=26.22 p=<.001 df=2/278	Males: F=7.61 p=<.001 df=2/278
	Females F=2.09 p=ns df=2/205	Females F=.34 p=ns df=2/205

Another interpretation of this phenomenon would be that work patterns differed by sex more than by treatment group. The data are:

1. At four months, women had worked 30% more months than men but were somewhat less likely to be working currently.
2. At ten months, women had worked about half as much time as men and were one-third as likely to be working currently.

These two facts lead to the speculation that women of all groups tended to work less and less as time went on, and men worked more and more. The work frequency curves of men and women probably looked like this:



This interpretation implies that the work patterns of men and women were unaffected by Job Corps training. Because the data on NoShows and the Job Corps groups was gathered after different time lags, there is no way to investigate this possibility further.

3.4.3 Relationship of Employment Variables to Outcome Measures

Although the scales and items used in this study were considered valid and reliable for this population (insofar as they had been validated), it is important for a study of this type to take every opportunity possible to retest the validity of the scales. One of the most important types of validity to investigate is criterion validity, which answers the question "Does a high score on or improvement on this scale correlate with a high level of or improvement on the behavior which the scale is purported to predict?" Because the present study gathered data both from scales and behavioral self reports, a limited test of criterion validity was undertaken.

Posttest scores on scales which were used to measure indirect job skill acquisition were correlated with self-reports of (1) current work status, (2) amount of time employed since Job Corps and (3) percent time employed since Job Corps.

Findings were disappointing. As the table below indicates, only three correlations of the twenty-seven were significantly different from zero. The three significant correlations were in the expected direction: Those who were currently working rated their "work status now" higher, and their "work status two years ago" lower, than those who were not working at the time of the posttest interview. Similarly, those who had worked the greatest percentage of time since Job Corps rated their "work status now" highest.

Table 3-21

Correlation of Posttest Scores on Job-Related Outcomes with Employment Status Variables

CRITERION SCALE	Length of employment since Job Corps	Percent time employed since Job Corps	Currently Working
Job Seeking Skills	.06	0	.04
Job Holding Skills	-.03	-.04	-.02
Job Knowledge	-.04	-.07	-.01
Work Ethic	-.02	-.03	-.08
Lack of Job Skill Confidence	.01	.05	.08
Work Relevant Attitudes	0	.01	-.05
Work Status Two Years Ago	0	-.02	-.10*
Work Status Now	.05	.10*	.16***
Work Status Two Years from Now	-.03	.03	.05

*p=<.05
***p=<.001

What was disapointing was the lack of correlation of such scales as Job Seeking Skills, Job Knowledge, etc. Although there may have been good reasons for those with high scores not to be working** (poor job market, pregnancy, family obligations), the absence of any relationship casts the predictive value of these scales into questi[illegible]. Either the scales do not measure skills they purport to measure, or the posession of those skills did not affect the work behavior of this sample. Further research must be conducted to identify those scales which are valid against such behavioral criteria.

**These correlations were computed only on respondents who were not in school full time at the time of the posttest.

3.5 Summary

Although the overall employment rates for all of these groups of young people were low, it is possible that the Job Corps experience for those who stayed on past the initial three months was beneficial; they did seem to find more full-time employment than those who dropped out before three months. While conclusions are only speculative without figures at comparable intervals for the three groups, it also may be that previous Job Corps enrollment helped young women's employment chances. Their employment rate was essentially similar to those of their male counterparts--a parity which was not found among the NoShows.

The lack of correlation of posttest scores on job-related outcome variables with post-program employment status indicates that these scales lack criterion validity, as tested by the three employment status items in this battery. Although the study was not designed as scale validation research, this finding calls into the question the validity of the results of these scales.

4.0 FINDINGS ON SOCIAL-ATTITUDINAL IMPACTS

Five outcomes were included in this area of study. All are interpersonal in nature. Job Corps attempts to improve social attitudes by means of its counseling and residential living programs. Through counseling, it tries to help youth deal with family problems, difficulties in interpersonal relations and difficulties in adjustment to center life. The residential living program offers enrollees peer group companionship, extra-curricular activities and leadership opportunities. The five outcomes in the social-attitudinal area attempted to measure the impact of these Job Corps program services. The outcomes were:

- Attitude Toward Authority
- Self-Esteem
- Criminal Justice System Involvement
- Family Relations
- Leisure Time

The first three of these outcomes were measured by means of scales. In each case, the research questions were the same. They were:

1. Does Job Corps have an impact on this outcome?

This question is answered by means of pre-post comparisons of mean scores of each of the two Job Corps groups (Persisters and Dropouts) and by means of comparing these change scores with change scores of the comparison group (NoShows).

2. Are Job Corps' impacts on this variable different for men and women?

This question is answered by means of comparisons between change scores of males and change scores of females in each group.

3. Do there appear to be patterns of impact on these variables?

This question is answered in the summary discussions of outcomes at the end of the chapter.

Each outcome variable is discussed separately in this chapter, and each scaled outcome is analyzed in the same way, for ease of interpretation. First the outcome is described briefly. Then a table is presented which displays mean pretest scores, posttest scores, and difference scores, separately for males and females within each of the three applicant groups (Persisters, Dropouts, and NoShows). On the far right of each table are the results of t tests of significance. These tests attempt to answer the first research question--to determine whether there was a substantial (significant) change in the mean scores of each of the six groups from pretest to posttest. Asterisks reference t's which are significant at the .05 level or less; the presence of more than one asterisk indicates a higher level of significance. It should be noted that the size of the t required for significance varies based on the sample size of each group and subgroup.

To shed further light on the first research question, F tests have been computed to compare the three groups at the time of pretest and at the time of posttest. An F test has been also made among the difference scores of the three groups. Results of these F tests on between-groups differences are reported at the bottom of the table and in the text, with statistical information in parentheses in cases of significance.

To answer the second research question, F tests have been computed to compare mean scores of males and females in each group at pretest and posttest. Again, results are reported at the bottom of the table.

Answers to the third research question appear in summary discussions. In addition, on some outcomes the results of interscale correlations are reported. In order to avoid overusing the data, these correlations were computed only in cases where associations between two scales were hypothesized a priori.

In the case of the two outcomes which were analyzed on an item by item basis, the results on each item are displayed for men and women separately. Because these data are limited to the nominal scale in most cases, the chi-square statistic is used to determine whether or not the distribution of respondents in the contingency table is significantly different from the expected distribution.

As in the case of the outcomes measured by means of scales, those measured on an item by item basis are discussed in terms of the three research questions enumerated above.

4.1 Attitude Toward Authority

The Attitude Toward Authority scale of the Youth Assessment Battery was the instrument used to measure social attitudes in this study. A number of other social attitude scales had been considered for inclusion but were later dropped. On this scale, the higher the score, the more deferential to authority the respondent is. In Table 4-1, the results on the Attitude Toward Authority scale are arrayed. All three respondent groups started out, at pretest, at about the same level on this scale, with male Dropouts more deferential than female Dropouts at a level approaching significance (F = 3.82; df = 2/210; p = .05). Of the three groups, only the Persisters increased their scores reliably. The others did not change significantly, although all subgroups except the NoShow men improved somewhat. A surprising finding, considering expectations based on stereotypes, was that females in each group scored somewhat lower (less deferential) than the males on both pretest and posttest.

These results suggest that Job Corps training inculcates respect for authority in both men and women, especially those who stay at least three months.

Table 4-1

CHANGES IN: ATTITUDE TOWARD AUTHORITY SCALE SCORES

By SEX AND TREATMENT GROUP

Treatment Groups	Mean Pretest Score	Mean Posttest Score	Mean Difference Score	N	Difference Score t
Persisters	41.48	42.95	1.47	164	2.0 *
Males	41.86	43.22	1.35	99	1.45
Females	40.89	42.54	1.65	65	1.43
Dropouts	41.83	42.98	1.15	212	1.71
Males	42.73	43.46	0.73	121	.81
Females	40.63	42.34	1.71	91	1.70
Noshows	42.66	42.69	0.03	74	.03
Males	43.78	43.13	-0.65	42	1.35
Females	41.19	42.13	0.93	32	.59

Possible range: 12-60

*p= < .05
**p= < .02
***p= < .01

4.2 Self-Esteem

One of the important noneconomic impacts that job training can have is to give its participants a sense of self-worth. In this study, that benefit was measured by Rosenberg's Self-Esteem Scale. The 10 items of this scale are particularly addressed to adolescents and cover such areas as self-concept, self-worth, and self-respect.

There were no significant differences among the three respondent groups at pretest. Examination of Table 4-2 shows that only the Persisters manifested a statistically reliable increase in self-esteem between pre- and posttest. Persister women, in fact, moved from being the group with the lowest scores to being the group with the second highest scores. Dropouts of both sexes showed a nonsignificant drop in their Self-Esteem scores.

Furthermore, the analysis of variance of the pre-post difference scores among the three respondent groups revealed that there was a significant Between Groups effect ($F = 3.199$, $df = 2/422$, $p < .05$) due to the differences between the Persisters and Dropouts ($t = 2.47$, $df = 350$, $p < .05$). The fact that there were no significant differences at pretest (in fact the dropouts began somewhat higher) indicates that the difference score effect is a "real" one.

What is impressive is that the differences discussed above prevailed in the presence of a possible "ceiling" effect. That is, all three groups started out, at pretest, close to the top of the range of Self-Esteem scale scores (the possible range of scores on this scale is 10-20). Thus the fact that the Dropouts' Self-Esteem scores declined and the NoShows' scores did not increase could be attributed to a ceiling effect artifact. Assuming, however, that the change scores are not a function of such an artifact, it can be concluded that remaining in Job Corps gave the Persisters (particularly the females) an increased sense of self-worth. It is interesting to note that there is a significant positive correlation ($r_{pb} = .18$, $p < .001$) in the Persister group between the Self-Esteem Scale change score and the tendency to join the Job Corps as a result of problems at home. It might be conjectured that as the Persisters were removed from their home environments for a substantial period of time, they discovered that they functioned much better away from home, and as a result, their self-esteem increased.

Table 4-2

CHANGES IN: SELF-ESTEEM SCALE SCORES

By SEX AND TREATMENT GROUP

Treatment Groups	Mean Pretest Score	Mean Posttest Score	Mean Difference Score	N	Difference Score t
Persisters	17.30	17.69	0.39	155	2.04 *
Males	17.36	17.54	0.20	92	0.84
Females	17.21	17.89	0.68	63	2.10 *
Dropouts	17.53	17.28	-0.25	197	1.55
Males	17.45	17.20	-0.25	106	1.13
Females	17.63	17.39	-0.24	91	1.06
Noshows	17.64	17.83	0.19	71	.69
Males	17.72	17.90	0.18	40	.50
Females	17.55	17.74	0.20	31	.48

Possible range: 10-20

Significant F tests: Across groups on difference scores (overall) F=3.49*

*p= <.05
**p= <.02
***p= <.01

Although the decrease in self-esteem on the part of Dropouts was not significant, previously discussed findings on attitudes indicate that the failure to remain in Job Corps probably did have negative effects on the self-images of these youth.

4.3 Involvement with the Criminal Justice System

One of the most tangible non-economic outcomes that Job Corps hopes to achieve is a reduction in the recidivism rate of youngsters who come to Job Corps with a history of delinquency or adult offenses. Regulations indicate that applicants with court histories are to be considered "questionable" in terms of eligibility, with the decision made by the Regional Office on a case-by-case basis. Youngsters with histories of violent or property crimes are usually rejected; those with status offenses (runaways, incorrigibles) are usually accepted. According to data from Job Corps records, 10% of the Persisters and 11% of Dropouts in this sample were "questionables" at the time of application.

On the pretest and posttest instruments, five questions regarding criminal justice system involvement were asked. Information on arrests, convictions, court appearances, probation and incarceration were requested. Although responses to such sensitive questions are often considered unreliable, the self-report method of measurement was chosen instead of research into court records because of the issue of confidentiality. Because of the assurances of anonymity given in the instrument instructions, the research staff felt that the respondents would offer honest responses.

Questions on the pretest and posttest were worded somewhat differently. For example, on the pretest, respondents were asked if they had ever been arrested. On the posttest they were asked if they had been arrested "since your Job Corps experience ended,"* a period of two to four months for the Job Corps groups, and eight to ten months for the NoShows. The posttest time frame is therefore much shorter than that of the pretest and the "yes" response rate is accordingly much smaller on most items. It should be remembered that the NoShow time frame on the posttest is more than twice as long as that of the other two groups.

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*The instruction stated:

> "We will be asking you questions about what has happened to you since your Job Corps experience ended. If you did not actually go to Job Corps, when we say 'Since your Job Corps experience ended' we mean since you applied to Job Corps. If you were in Job Corps, when we say 'Since your Job Corps experience ended' we mean what has happened to you since your Job Corps termination."

A scale of criminal justice system involvement was developed to incorporate all five items. The scale ranges from 0 to 5, with scores representing the number of "yes" responses. This linear scoring method was chosen because answers here tend to be cumulative; a person who had been arrested only would score one, while a person who had been convicted would score two, one for the arrest and one for the conviction. Table 4-3 displays the findings.

As Table 4-3 indicates, all groups except Dropout females and NoShow females significantly reduced their police and court involvement. This drop was expected, considering that the time period covered was only four to ten months on the posttest. The fact that the two groups of women did not decline significantly is probably an artifact of a "floor" effect; that is, they were so low on the pretest that they could not decrease their scores.

Males in each group were higher than females on both the pretest and the posttest. Among women, Persisters were significantly higher on the pretest and reduced their scores significantly more; female Persisters had the lowest rate of police involvement on the posttest.

NoShows were expected to reduce their scores less than those in the Job Corps groups because the time period covered for them was more than twice as long. Their posttest scores were somewhat higher, but not nearly as much as would have been justified by the time difference. This lack of difference indicates either that the Job Corps terminees had a relatively high rate of police and court involvement or that this scale is not sensitive to the kinds of differences likely to appear over time.*

The findings for Persister women are encouraging for Job Corps. For some reason women with previous court problems tended to stay longer in Job Corps and reduce their rates of police involvement markedly. These women seem to have found Job Corps a positive influence.

In an attempt to shed more light on the phenomenon of police and court involvement, the five items on the scale were analyzed separately.

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*For example, the posttest question asked "Have you been arrested since your Job Corps experience ended?" Those who had been arrested several times and those arrested once would have both answered "yes," and no differentiation was possible.

Table 4-3

CHANGES IN POLICE INVOLVEMENT

By SEX AND TREATMENT GROUP

Treatment Groups	Mean Pretest Score	Mean Posttest Score	Mean Difference Score	N	Difference Score t
Persisters	1.37	.41	-0.96	165	7.01***
Males	1.64	.61	-1.03	99	5.30***
Females	.97	.10	-0.86	66	4.72***
Dropouts	1.30	.55	-0.75	205	6.05***
Males	1.90	.79	-1.10	116	6.07***
Females	.52	.24	-0.28	89	1.95
Noshows	1.30	.68	-0.62	69	2.71***
Males	1.94	.92	-0.82	39	2.47*
Females	.73	.37	-0.37	30	1.20

Possible range: 0-5

Significant F tests: Across groups on difference scores (women only) F=3.18.
Between the sexes on the pretest and the posttest (all three groups)

*p = < .05
**p = < .02
***p = < .01

4.3.1 Legal Status Items - Males

For males, there were no significant differences among Persisters, Dropouts, and NoShows on any of the five items on the pretest or the posttest.

The first item was arrests:

Table 4-4
(in percentages)

Males

Have you ever been arrested by the police?		
Pretest:	Yes	No
Persisters	55	45
Dropouts	60	40
NoShows	57	43

X^2 = .59
df = 2
p = ns
N = 267

Have you been arrested by the police since your Job Corps experience ended?		
Posttest:	Yes	No
Persisters	19	81
Dropouts	20	80
NoShows	31	69

X^2 = 2.6
df = 2
p = ns
N = 274

Pre-post "yes" differences
36
40
26

NoShows reported only a slightly higher arrest rate than other groups on the posttest, although the time period covered was more than twice as long. The number of arrests is not specified here, however.

Court appearances and convictions are examined next:

Table 4-5
(in percentages)

Males

Have you ever been up before a judge for anything?		
Pretest:	Yes	No
Persisters	46	54
Dropouts	48	52
NoShows	47	53

X^2 = .15
df = 2
p = ns
N = 270

Have you been up before a judge for anything since your Job Corps experience ended?		
Posttest:	Yes	No
Persisters	20	80
Dropouts	24	76
NoShows	29	71

X^2 = 1.2
df = 2
p = ns
N = 279

Pre-Post "yes" differences
26
24
18

Table 4-6
(in percentages)

Males

Have you ever been convicted of a crime?		
Pretest:	**Yes**	**No**
Presisters	18	82
Dropouts	17	83
NoShows	21	79

X^2 = .34
df = 2
p = ns
N = 272

Have you been convicted of a crime since your Job Corps experience ended?		
Posttest:	**Yes**	**No**
Persisters	7	73
Dropouts	11	89
NoShows	10	90

X^2 = 1.2
df = 2
p = ns
N = 272

Pre-Post "yes" differences
9
6
11

On both court appearances and convictions, all groups decreased on the posttest, and the conviction level of NoShows over ten months was no more than for the other groups over four months. There were no significant differences among groups. The pretest and posttest conviction rate was less than half the rate of court appearances, on both the pretest and the posttest. This is probably a reflection of the non-conviction procedure of most juvenile justice systems.

The next question dealt with time in prison:

Table 4-7
(in percentages)

Males

Have you ever spent time in jail or prison?		
Pretest:	**Yes**	**No**
Persisters	16	84
Dropouts	17	83
NoShows	21	79

X^2 = .52
df = 2
p = ns
N = 268

Have you spent time in jail or prison since your Job Corps experience ended?		
Posttest:	**Yes**	**No**
Persisters	14	86
Dropouts	11	89
NoShows	14	86

X^2 = .45
df = 2
p = ns
N = 268

Pre-Post "yes" differences
2
6
7

Incarceration rates are interesting because, like convictions, pretest rates were low and there was little difference between pretest and posttest rates. This similarity is probably due to the respondents' increase in age, which made them less likely to be released into the custody of a parent. NoShows, over twice as much time, showed no more instances of incarceration.

The final question covered probationary status:

Table 4-8
(in percentages)

Males

Have you ever been put on probation by a judge?		
Pretest:	Yes	No
Persisters	36	64
Dropouts	36	64
NoShows	25	75

X^2 = 2.1
df = 2
p = ns
N = 269

Have you been put on probation by a judge since your Job Corps experienced ended?		
Posttest:	Yes	No
Persisters	5	95
Dropouts	12	88
NoShows	10	90

X^2 = 4.06
df = 2
p = ns
N = 274

Pre-Post "yes" differences
31
24
15

Although differences were not significant, Persisters were less likely than other groups to have been placed on probation after Job Corps.

4.1 2 Legal Status Items - Females

In comparison to males, all items of police involvement were low for all groups, both pre- and post. The comparison of the legal status of females contains one significant finding: Female Persisters were most likely to have been on probation prior to Job Corps.

Items are discussed in the same order as for males. Arrests are first:

Table 4-9
(in percentages)
Females

Have you ever been arrested by the police?			Have you been arrested by the police since your Job Corps experience ended?			Pre-Post "yes" differences
Pretest:	Yes	No	Posttest:	Yes	No	
Persisters	25	75	Persisters	4	96	21
Dropouts	16	84	Dropouts	5	95	11
NoShows	13	87	NoShows	6	94	7

Pretest:
$X^2 = 2.9$
df = 2
p = ns
N = 199

Posttest:
$X^2 = .31$
df = 2
p = ns
N = 203

As noted in the discussion of the scale scores above, Persister women came to Job Corps with a more serious police history. As is shown here, they had the highest pre Job Corps and lowest post Job Corps arrest rate.

The next table illustrates rates of court appearance:

Table 4-10
(in percentages)
Females

Have you ever been up before a judge for anything?			Have you been up before a judge for anything since your Job Corps experience ended?			Pre-Post "yes" differences
Pretest:	Yes	No	Posttest:	Yes	No	
Persisters	32	68	Persisters	4	96	28
Dropouts	20	80	Dropouts	7	93	13
NoShows	25	75	NoShows	9	91	16

Pretest:
$X^2 = 2.7$
df = 2
p = ns
N = 201

Posttest:
$X^2 = 1.38$
df = 2
p = ns
N = 204

Persister women were highest on the pretest and lowest on the posttest in rate of court appearance. Next, convictions are displayed:

Table 4-11
(in percentages)

Females

Have you ever been convicted of a crime?			Have you ever been convicted of a crime since your Job Corps experience ended?			Pre-Post "yes" differences
Pretest:	Yes	No	Posttest:	Yes	No	
Persisters	11	89	Persisters	0	100	11
Dropouts	4	96	Dropouts	4	96	0
NoShows	6	94	NoShows	6	94	0

Pretest:
$X^2 = 2.4$
df = 2
p = ns
N = 199

Posttest:
$X^2 = 4.02$
df = 2
p = ns
N = 204

Dropouts and NoShows reported the same conviction rates on the pretest and posttest. Persisters, on the other hand, went from 11% to 0%, an encouraging finding for Job Corps.

The incarceration rate for women is displayed in the next table:

Table 4-12
(in percentages)

Females

Have you ever spent time in jail or prison?			Have you spent time in jail or prison since your Job Corps experience ended?			Pre-Post "yes" differences
Pretest:	Yes	No	Posttest:	Yes	No	
Persisters	10	90	Persisters	1	99	9
Dropouts	8	92	Dropouts	4	96	4
NoShows	9	91	NoShows	6	94	3

Pretest:
$X^2 = .13$
df = 2
p = ns
N = 192

Posttest:
$X^2 = 1.93$
df = 2
p = ns
N = 192

Unlike males, females in all groups reduced their rates of incarceration. Again, Persisters made the greatest gains, although differences were small.

The final question concerned probation:

Table 4-13
(in percentages)

Females

Have you ever been put on probation by a judge?			Have you been put on probation by a judge since your Job Corps experience ended?			Pre-Post "yes" differences
Pretest:	Yes	No	Posttest:	Yes	No	
Persisters	22	78	Persisters	1	99	21
Dropouts	8	92	Dropouts	3	97	5
NoShows	16	84	NoShows	6	94	10

$X^2 = 6.31$
df = 2
$p = <.04$
N = 193

$X^2 = 1.87$
df = 2
p = ns
N = 204

This item is the only one in which significant differences among groups were found; significantly more Persister women had been on probation than women in other groups. Reasons for these baseline differences are unclear. Perhaps women on probation had been in group homes or reform schools and were thus more comfortable than others in an institutional environment. Another interpretation might be that these women saw Job Corps as a way out of their damaging home situations. In any case, the trend observed earlier appears again: Persister women showed the greatest decrease over time.

4.3.3 Criminal Justice System Involvement as a Factor in Outcome Scores

Because the findings on the differences among groups were interesting and policy relevant, further analysis was undertaken to determine whether differences in legal status were associated with differences in the impact of Job Corps. Study subjects were divided into two groups -- those who made one or more positive responses to the Criminal Justice System Involvement questions on the pretest and those who made no positive responses. The former group will be called "ex-offenders" for the purposes of this analysis. The two groups were compared in terms of their mean scores on outcome variables; the research question to be answered was

"Does Job Corps have more impact on ex-offenders than on others?" NoShows were eliminated from this analysis to assure that all youth were measured on the impact of Job Corps.

The results of this analysis are extremely valuable to Job Corps. On a large number of outcome variables ex-offenders improved after Job Corps more than others did. Table 4-14 displays pretest, posttest and difference scores of the two groups for each outcome in which one or more of the intergroup comparisons was significant.

On Job Seeking Skills, ex-offenders simply improved more than the others. On Job Holding Skills, Job Knowledge, Nutrition Information, Health Information and Ladder of Life in Two Years, ex-offenders improved slightly or remained the same while others declined. Only on two scales -- Ladder of Life Now and Work Relevant Attitudes -- did ex-offenders fare worse on the posttest than on the pretest. (A final variable -- Criminal Justice System Involvement -- will be discussed in detail below). The decline in Ladder of Life Now may not actually represent a negative finding, since ex-offenders' consideration of themselves lower on the ladder at posttest than at pretest may well reflect a desirable change -- a sense of realism replacing a sense of bravado. The decline in Work Relevant Attitudes cannot be interpreted in a positive way, however.

The fact that ex-offenders improved or did not decline on Job Seeking Skills, Job Knowledge, Nutrition Information and Health Information indicates that on all the scales which tested factual knowledge, Job Corps had a positive impact on ex-offenders. Such a consistent finding is a rarity in a study of this type, and it merits serious consideration on the part of Job Corps officials, both for its positive and its negative implications. Apparently, those youngsters who had police records were the ones who also had missed much schooling. Whether they missed school because they had to go to court or they got in trouble for missing school is unknown. What is clear is that they made up a great deal of what they missed in Job Corps. They were aware of this improvement evidently, because their ratings of their job status two years from now increased from pretest to posttest, while the ratings of the others declined. The negative implication of this finding lies in the decline of the other group. Those who entered Job Corps with somewhat better academic skills did not improve, and in some cases lost ground.

Table 4-14

Impact of Outcomes on Ex-Offenders

Key: 0 = no police record: N =
1+ = "ex-offenders": N =

Scale			Means	F	df	p
Job Seeking Skills	Pretest	0	12.18	7.16	1/365	<.005
	Scores	1+	11.30			
	Posttest	0	12.67	2.48	1/363	ns
	Scores	1+	12.15			
	Difference	0	.56	2.71	1/352	ns
	Scores	1+	.89			
Job Holding Skills	Pretest	0	30.45	6.23	1/363	<.02
	Scores	1+	29.87			
	Posttest	0	29.84	.12	1/370	ns
	Scores	1+	29.95			
	Difference	0	-.69	4.58	1/356	<.05
	Scores	1+	-.05			
Job Knowledge	Pretest	0	21.37	12.18	1/362	<.001
	Scores	1+	20.15			
	Posttest	0	20.27	.44	1/365	ns
	Scores	1+	20.57			
	Difference	0	-1.19	8.72	1/350	<.005
	Scores	1+	.27			
Criminal Justice System Involvement	Pretest	0	0.00	1031.51	1/368	<.001
	Scores	1+	2.70			
	Posttest	0	0.22	23.09	1/368	<.001
	Scores	1+	0.76			
	Difference	0	0.27	258.09	1/368	<.001
	Scores	1+	-1.94			
Work Relevant Attitudes	Pretest	0	55.76	.58	1/334	ns
	Scores	1+	55.03			
	Posttest	0	55.09	10.88	1/365	<.001
	Scores	1+	51.90			
	Difference	0	-.58	3.36	1/325	ns
	Scores	1+	-2.74			
Nutrition Information	Pretest	0	2.79	11.09	1/369	<.001
	Scores	1+	2.39			
	Posttest	0	2.72	4.25	1/368	<.05
	Scores	1+	2.48			
	Difference	0	-.09	1.92	1/360	ns
	Scores	1+	.10			
Health Information	Pretest	0	12.43	10.58	1/366	<.005
	Scores	1+	11.46			
	Posttest	0	12.05	2.45	1/369	ns
	Scores	1+	11.48			
	Difference	0	-.23	.35	1/358	ns
	Scores	1+	.00			
Ladder of Life, Now	Pretest	0	5.58	.34	1/296	ns
	Scores	1+	5.77			
	Posttest	0	6.28	5.44	1/335	<.02
	Scores	1+	5.67			
	Difference	0	.65	4.00	1/271	<.05
	Scores	1+	-.10			
Ladder of Life, Two Years From Now	Pretest	0	8.74	.48	1/292	ns
	Scores	1+	8.59			
	Posttest	0	8.21	1.87	1/333	ns
	Scores	1+	8.53			
	Difference	0	-.55	5.35	1/263	<.02
	Scores	1+	.15			

The final topic for discussion here is the comparison of Criminal Justice System Involvement of the two groups. To compare them on the pretest would be redundant; by definition the non-offenders began at zero, and the 2.70 mean "yes" responses of the ex-offenders was significantly higher. On the posttest, however, the results were more valid. The non-offenders had nowhere to go but up, and so they did, modestly. The ex-offenders decreased sharply, but not enough to eliminate the significant difference between groups. It was enough of a reduction, however, to assure that the difference between change scores (non-offenders up, ex-offenders down) would be highly significant. The question remains "Was this reduction among ex-offenders simply an artifact of the study (the pretest covered many years, while the posttest covered only a few months) or can Job Corps be said to have had a positive impact on ex-offenders?" This question cannot be answered statistically, yet it can be pointed out that posttest scores of Persisters as a group were 30% of their pretest scores and posttest scores of Dropouts as a group were 44% of their pretest scores, while the posttest scores of ex-offenders were only 28% of their pretest scores. Job Corps can look at this finding as a major non-economic impact.

It can be concluded that:

- Ex-offenders benefited greatly from Job Corps in the area of factual knowledge;
- Non-offenders did not gain in factual knowledge from Job Corps training;
- Ex-offenders improved in criminal behavior after Job Corps more than the sample as a whole.

4.4 Family Relations

Two of the original outcomes proposed for study were family relations and leisure time activities. Both were dropped as major areas of study because of the difficulty of finding appropriate instruments to measure these outcomes. In order to offer a limited view of changes in these areas, a number of items were developed to be added to the posttest. The posttest items were worded so that they could be administered both to former Job Corps enrollees and to NoShows. The phrase "since your Job Corps experience ended" was used to give a baseline point for comparison.* Six items on the topic of family relations were included--three items concerned behavioral changes in regard to family life; three items concerned changes in feelings.

4.4.1 Behavioral Items

The first behavioral item presented is marriage.

Table 4-15
(in percentages)
Males

Have you gotten married or started living with a partner since your Job Corps experience ended?	Persisters	Dropouts	NoShows	Statistics
Yes	6	7	10	χ^2= .65 df=2 p =ns N =265
No	94	93	90	

Females

Have you gotten married or started living with a partner since your Job Corps experience ended	Persisters	Dropouts	NoShows	Statistics
Yes	11	12	10	χ^2= .13 df =2 p =ns N =202
No	89	88	90	

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*The instruction stated: "We will be asking you questions about what has happened to you since your Job Corps experience ended. If you did not actually go to Job Corps, when we say 'Since your Job Corps experience ended' we mean since you applied to Job Corps. If you were in Job Corps, when we say 'Since your Job Corps experience ended' we mean what has happened to you since your Job Corps termination."

There were no significant differences; all groups remained overwhelmingly unmarried. The Job Corps demographic data discussed in Appendix B indicated that only one person who later attended Job Corps was married at the time of application. (NoShows were not included in that data base.) The second item concerned divorce.

Table 4-16

Table 4-16
(in percentages)
Males

Have you gotten divorced or broken up with your partner since your Job Corps experience ended?	Persisters	Dropouts	NoShows	Statistics
Yes	12	14	2	$\chi^2=3.97$ df=2 p =ns N =268
No	88	86	98	

Females

Have you gotten divorced or broken up with your partner since your Job Corps experience ended?	Persisters	Dropouts	NoShows	Statistics
Yes	19	15	17	$\chi^2= .41$ df=2 p =ns N =201
No	81	85	83	

On this variable there were again no significant differences, although NoShow males indicated more stability in their relationships, perhaps because those relationships were not disrupted by the absence of one partner at Job Corps. Another interpretation is that the NoShow males, who were the most likely of any group to be working at the time of the posttest (see Section 3.4), were the most reliable breadwinners and therefore least vulnerable to marital dissolution. Research from the National Longitudinal Study indicates that marital stability and steady employment of the male are correlated.

The final behavioral variable was childbirth.

Table 4-17
(in percentages)
Males

Have you started your own family since your Job Corps experience ended?	Persisters	Dropouts	No Shows	Statistics
Yes	13	18	12	$\chi^2=1.45$ df=2 p =ns N =268
No	87	82	88	

Females

Have you started your own family since your Job Corps experience ended?	Persisters	Dropouts	No Shows	Statistics
Yes	21	13	38	$\chi^2=9.51$ df=2 p = .008 N =203
No	79	87	63	

Findings here were significant for females. Over the nine-month period since Job Corps application, almost 40% of the NoShow women had children or became pregnant. Perhaps pregnancy was the reason why they did not enroll. A majority of these women were probably unmarried. This inference is derived from the fact that there was only one married applicant in the Job Corps groups and that only 10% of the female NoShows indicated above that they had recently gotten married. It should be noted that Persister women also started their own families at the same rate, since the period of time for NoShows was more than twice as long.

The wording of the question was probably confusing. Although it was an attempt to measure fertility of men as well as women, male respondents may have fathered children without feeling that they had "started their own family." In addition, women who became pregnant but already had a child might have responded negatively. The same confusion would have held for men who already had a child. This problem with the wording of the question might explain the lower "yes" rate for Dropout women. They might have dropped out because of child care problems. This is a fairly common problem among Job Corps women. If they did have children at the time they were enrolled, then subsequent pregnancies would not have showed up as "yes" answers to this question.

Although the wording of the question lowered the reliability of the responses, it should be remembered that such lack of reliability means only that respondents, both male and females might have under-reported their fertility rates.

The lack of real differences among groups (when time is adjusted for) indicates that Job Corps has no impact on the high teenage pregnancy rate. Because of problems with the wording of the question, it is difficult to interpret male-female differences on this item.

4.4.2 Attitudinal Items

The first attitudinal item presented is changes in general family relations. The question did not specify whether "family" referred to parents and siblings or to spouse and children.

Table 4-18
(in percentages)
Males

Since my Job Corps experience ended, my relations with my family have	Persisters	Dropouts	NoShows	Statistics
Become better	35	29	15	$\chi^2=10.6$ df= 4 $p = < .03$ N =268
Stayed about the same	54	64	83	
Become worse	11	7	2	

Females

Since my Job Corps experience ended, my relations with my family have	Persisters	Dropouts	NoShows	Statistics
Become better	26	23	25	χ^2= .60 df=4 p =ns N =202
Stayed about the same	59	64	63	
Become worse	16	13	13	

In the area of feelings about their families, significant differences were found among the males. NoShows were most likely to report no change; while Persisters reported the most change, both positive and negative. Women overall were more likely than men to report negative changes in family relations, and like the men, female Persisters reported the most change. Job Corps seemed to help men get along better with their families, perhaps because, having been on their own for a while, they were more able to see their families in perspective. For women, on the other hand, the Job Corps experience did not seem to be a factor in their changes in feelings.

The second attitudinal item presented is changes in heterosexual relations.

Table 4-19 (in percentages)
Males

Since my Job Corps experience ended, my relations with my husband/wife or boyfriend/girlfriend have:	Persisters	Dropouts	NoShows	Statistics
Become better	38	30	10	χ^2=13.44 df= 6 p =< .03 N =264
Stayed about the same	37	43	63	
Become worse	11	14	10	
I have no husband/wife or boyfriend/girlfriend	15	13	17	

Females

Since my Job Corps experience ended, my relations with my husband/wife or boyfriend/girlfriend have:	Persisters	Dropouts	NoShows	Statistics
Become better	31	24	31	χ^2=8.12 df=6 p =ns N =198
Stayed about the same	37	39	56	
Become worse	13	17	9	
I have no husband/wife or boyfriend/girlfriend	18	19	3	

Here again, findings for males but not females were significant. The trend is similar to that in the previous question; NoShows reported the least change and Persisters reported the most positive change. On this item as well as on the previous one, female NoShows reported feeling as positive as the Persisters and not as negative. The most negative change was reported by the female Dropouts. Apparently, the Job Corps experience helped men relate not only to their families, but also to their partners. That it did not help women to do so must be viewed with concern.

The final attitudinal item presented is change in feelings about living partners.

Table 4-20 (in percentages)

Males

Since my Job Corps experience ended, how I feel about the person or persons with whom I live has:	Persisters	Dropouts	NoShows	Statistics
Become better	40	32	27	χ^2=3.98 df=4 p =ns N =268
Stayed about the same	52	57	68	
Become worse	10	11	5	

Females

Since my Job Corps experience ended, how I feel about the person or persons with whom I live has:	Persisters	Dropouts	NoShows	Statistics
Become better	42	34	41	χ^2=4.47 df=4 p =ns N =200
Stayed about the same	49	57	41	
Become worse	9	9	19	

The general trend continued here; female NoShows felt as positively as Persisters about their changes over the past few months. In this case, however, a high proportion of female NoShows reported negative changes. Male NoShows again reported the least change, either positive or negative. Differences here were not significant for either sex.

4.4.3 Conclusions

Findings on the behavioral questions indicate that Job Corps had no impact on the rate of marriage, divorce or childbearing of this respondent group. Because of the variation in time period covered, the lack of differences among groups is difficult to interpret. Furthermore, the wording of the childbearing question makes its results unreliable. Thus, little significance should be attributed to these findings.

The attitudinal questions were not subject to such difficulties, however. Among males, two of the three questions yielded significant differences among groups. In each case, NoShows reported the least change and Persisters reported the most (and most positive) change. Job Corps clearly made an impact on the attitudinal part of the family relations outcome for males.

In the case of females, the findings were less encouraging. Persisters and NoShows responded almost identically, with Dropouts reporting an only slightly more negative picture. It appears, therefore, that Job Corps had no impact on women's attitudes toward their families and living partners.

4.5 Leisure Time

Like family relations, this outcome was dropped as a major focus because of the difficulty of measuring it. Again, however, some insight can be gained by examining the posttest results of five items which were developed to examine changes in friendships and activities.

The first item presented is the making of new friends:

Table 4-21
(in percentages)

Males

Have you made new friends since your Job Corps experience ended?	Persisters	Dropouts	NoShows	Statistics
Yes	69	74	81	χ^2=2.04 df=2 p =ns N =269
No	31	26	20	

Females

Have you made new friends since your Job Corps experience ended?	Persisters	Dropouts	NoShows	Statistics
Yes	68	74	77	χ^2=1.38 df=2 p =ns N =203
No	32	26	23	

There were no significant differences for either sex. Unlike the pattern in the Family Relations outcome, here the NoShows reported the most change and the Persisters the least. For both males and females, NoShows, then Dropouts, then Persisters were most likely to have made new friends. Of course, NoShows had the most time to make new friends "since their Job Corps experience ended." This alone might explain the small marginal differences.

The second item presented is relationships with friends:

Table 4-22
(in percentages)

Males

Since my Job Corps experience ended, my relations with my friends have	Persisters	Dropouts	NoShows	Statistics
Become better	33	35	12	χ^2=10.25 df= 4 p = < .03 N =267
Stayed about the same	60	59	85	
Become worse	7	7	2	

Females

Since my Job Corps experience ended, my relations with my friends have	Persisters	Dropouts	NoShows	Statistics
Become better	30	25	28	χ^2=3.52 df=4 p =ns N =202
Stayed about the same	66	63	59	
Become worse	4	12	13	

Here the NoShow males returned to their previous mode of response; they reported significantly less change than the other groups. Also, Persisters and Dropouts were more likely than NoShows to have improved their relationships with friends. Among females there was little difference among groups, except that Persisters felt that their relations had gotten worse only a third as often as women in the other two groups.

The next item presented in participation in sports:

Table 4-23
(in percentages)

Males

Since my Job Corps experience ended, my interest and participation in sports has:	Persisters	Dropouts	NoShows	Statistics
Become better	37	45	32	$\chi^2=2.86$ df=4 p =ns N =267
Stayed about the same	55	50	61	
Become worse	8	6	7	

Females

Since my Job Corps experience ended, my interest and participation in sports has:	Persisters	Dropouts	NoShows	Statistics
Become better	34	25	22	$\chi^2=3.23$ df=4 p =ns N =203
Stayed about the same	59	62	66	
Become worse	7	13	13	

There were no significant differences on this item. As usual, NoShows reported the least change among the men. This was also the case among women, although differences were small. There was a slight tendency among both men and women for both Job Corps groups to report the most positive change. Perhaps the availability of recreational activities in Job Corps served as a catalyst for increased later participation.

The next item presented is interest in hobbies:

Table 4-24
(in percentages)

Males

Since my Job Corps experience ended, my interest in hobbies has:	Persisters	Dropouts	NoShows	Statistics
Become better	37	43	24	χ^2=4.7 df=4 p =ns N =268
Stayed about the same	56	50	68	
Become worse	7	7	7	

Females

Since my Job Corps experience ended, my interest in hobbies has:	Persisters	Dropouts	NoShows	Statistics
Become better	32	31	28	χ^2= .35 df=4 p =ns N =203
Stayed about the same	60	61	66	
Become worse	7	8	6	

Responses to this item were similar to those on the previous item; Job Corps veterans reported more interest in hobbies. There were no significant differences, although NoShows (this time of both sexes) continued to show the least change.

The final item in this outcome is feelings about the environment in which the respondent lives:

Table 4-25
(in percentages)

Males

Since my Job Corps experience ended, how I feel about where I live has:	Persisters	Dropouts	NoShows	Statistics
Become better	29	27	12	$\chi^2=6.2$ df=4 p =ns N =269
Stayed about the same	60	61	81	
Become worse	12	12	7	

Females

Since my Job Corps experience ended, how I feel about where I live has:	Persisters	Dropouts	NoShows	Statistics
Become better	33	35	25	$\chi^2=2.44$ df=4 p =ns N =202
Stayed about the same	54	47	53	
Become worse	13	18	22	

Responses to this final question repeated the pattern of the previous two. The two Job Corps groups felt better about their environments, although there were no significant differences. The least change was among male NoShows and the most negative change was among female NoShows.

Conclusions

Responses to these items showed a definite pattern that is encouraging to Job Corps. The leisure time activities offered by Job Corps resulted in a feeling of positive change among males, both Persisters and Dropouts, who were exposed to them. The tendency for NoShow males not to change, and to be least likely to report positive change, was noted in the Family Relations section and continued here.

For women, findings followed no discernable pattern. As in the case of Family Relations, it must be concluded that Job Corps had little impact on women on this outcome.

4.6 Summary: Social-Attitudinal Impacts

This area of study included scales which measure both behavioral and attitudinal change in the area of getting along with others -- friends, family, authority figures. On the three formal scales, Persisters improved more than the other two groups. On the two item-by-item outcomes, Persisters improved at least as much as the other two groups. The impact of Job Corps on those who stayed at least three months is clear.

It is encouraging for Job Corps that Dropouts performed quite well on this cluster of outcomes. On every outcome except Self-Esteem, their positive changes approached or exceeded those of the Persisters. This was more true for males than for females.

Probably the most important findings were those recorded for the criminal justice system outcome. Job Corps' positive impact on ex-offender women is most encouraging, both in terms of length of stay and in terms of recidivism. The program also helped both male and female ex-offenders in acquiring remedial education in a variety of areas.

The Family Relations and Leisure Time outcomes were measured in the least reliable way -- through a series of previously unvalidated items. The findings on these outcomes were relatively positive for Job Corps, although the lack of reliability calls some of the results into question. It remains for further research to study the impact of Job Corps on post-program family life, social life, pregnancy rate and marriage/divorce rate.

5.0 FINDINGS ON HEALTH AND EDUCATIONAL IMPACTS

In addition to its central mission of vocational training, Job Corps offers its participants health and educational services. In health, it provides full medical care, with a clinic for outpatient care and an infirmary for more serious problems, both on center. Further, all Job Corps enrollees are required to take a course in health as part of their educational program.

Job Corps' educational services consist of classes in basic reading and math for those who need it, intermediate-level classes for enrollees with better backgrounds, and GED (General Equivalency Diploma) classes for those advanced enough to work toward a high school diploma. These classes are required for all enrollees except the few who enter with high test scores and a high school diploma.

In order to assess the impact of Job Corps in these two areas, six outcomes were included in the Assessment Battery. They were:

- Health Information
- Health Care and Health Habits
- Selection of a Balanced Diet
- Junk Food Ratio
- Nutrition Information
- Educational Attainment

All were measured by means of scales, except for Health Care and Health Habits and Educational Attainment. As in the case of Chapters 3 and 4, the research questions for the scaled items were:

1. Does Job Corps have an impact on this outcome?

This question is answered by means of pre-post comparisons of mean scores of each of the two Job Corps groups (Persisters and Dropouts) and by means of comparing these change scores with change scores of the comparison group (NoShows).

2. Are Job Corps' impacts on this variable different for men and women?

This question is answered by means of comparisons between change scores of males and change scores of females in each group.

3. Do there appear to be patterns of impact on these variables?

This question is answered in the summary discussions of outcomes at the end of the chapter.

Each outcome variable is discussed separately in this chapter, and each scaled outcome is analyzed in the same way, for ease of interpretation. First the outcome is described briefly. Then a table is presented which displays mean pretest scores, posttest scores, and difference scores, separately for males and females within each of the three applicant groups (Persisters, Dropouts, and NoShows). On the far right of each table are the results of t tests of significance. These tests attempt to answer the first research question--to determine whether there was a substantial (significant) change in the mean scores of each of the six groups from pretest to posttest. Asterisks reference t's which are significant at the .05 level or less; the presence of more than one asterisk indicates a higher level of significance. It should be noted that the size of the t required for significance varies based on the sample size of each group and subgroup.

To shed further light on the first research question, F tests have been computed to compare the three groups at the time of pretest and at the time of posttest. An F test has also been made among the difference scores of the three groups. Results of these F tests on between-groups differences are reported at the bottom of the table and in the text, with statistical information in parentheses in cases of significance.

To answer the second research question, F tests have been computed to compare mean scores of males and females in each group at pretest and posttest. Again, results are reported at the bottom of the table.

Answers to the third research question appear in summary discussions. In addition, on some outcomes the results of interscale correlations are reported. In order to avoid overusing the data, these correlations were computed only in cases where associations between two scales were hypothesized a priori.

In the case of the two outcomes which were analyzed on an item by item basis, the results on each item are displayed for men and women separately. Because these data are limited to the nominal scale in most cases, the chi-square statistic is used to determine whether or not the distribution of respondents in the contingency table is significantly different from the expected distribution.

As in the case of the outcomes measured by means of scales, those measured on an item by item basis are discussed in terms of the three research questions enumerated above.

5.1 Health Information

The Health Information Scale was developed to assess retention of knowledge transmitted to enrollees in the mandatory Job Corps health curriculum. The scale was specifically designed to reflect the relative emphasis placed on several areas of health information by the courses. The areas covered and the number of items in each were:

- Personal Hygiene and First Aid -- 5 items
- Venereal Disease -- 4 items
- Birth Control -- 2 items
- Reproduction, Pregnancy and Birth -- 4 items
- Adolescent Sexuality -- 1 item
- Sickle Cell Anemia -- 1 item

In this section we look first at the changes in the overall Health Information Scale (scored as the total number of correct answers across the 17 items). Because there were no significant changes between pre- and posttest on this scale, we examine, secondly, the relative knowledge levels of the entire sample groups on each item before and after their Job Corps experiences. Finally, we also examine differences in health knowledge between males and females.

5.1.1 Changes in Health Information Scale Scores

Table 5-1 presents the mean pretest and posttest scores for males and females in each of the three groups and the mean change scores for each group. Both the Dropout males and females showed negative mean difference scores (stronger in the males), although these were not statistically significant. NoShows, who started out with somewhat higher scores, improved in health knowledge without being exposed to the Job Corps course. The other major trend was for the females to do significantly better than the males -- both in pretest scores and in posttest scores. Even among the Dropouts, where the scores declined between pretest and posttest, the females' scores declined less than the males' scores.

It would appear then that the Job Corps had a small impact on the level of health knowledge of enrollees who remained for a period of longer than three months. What is not clear is why the Dropouts (particularly males)

Table 5-1

CHANGES IN: HEALTH INFORMATION SCALE SCORES
By SEX AND TREATMENT GROUP

Treatment Groups	Mean Pretest Score	Mean Posttest Score	Mean Difference Score	N	Difference Score t
Persisters	11.93	12.13	.20	167	.79
Males	11.57	11.64	.07	98	.19
Females	12.45	12.83	.38	69	1.25
Dropouts	11.95	11.59	-.37	215	1.34
Males	11.61	11.00	-.61	120	1.69
Females	12.39	12.33	-.06	95	.15
NoShows	12.00	12.56	.56	75	1.37
Males	11.63	12.37	.74	43	1.23
Females	12.50	12.81	.31	32	.60

Possible range: 0-17

Significant F tests: Between sexes on the pretest (Persisters and Dropouts)
F = 3.81*/3.89*

Between sexes on the posttest (Persisters and Dropouts)
F = 4.83*/7.17***

*p = .05
**p = .02
***p = .01

showed a decline in knowledge and why those applicants who never attended a training center showed greater improvement in their health knowledge scores than those who attended training.

5.1.2 Impact of Job Corps on Specific Content Areas

The overall Health Information Scale scores suggest that the study respondents already knew a fair amount about health matters before applying to Job Corps, since all groups answered an average of 12 out of 17 items corrently on the pretest. This ceiling effect may have been a factor accounting for the lack of statistically reliable change on the Health Information Scale at posttest. Because of the high scores on the pretest, we also examined the individual item scores to see what patterns of health knowledge they revealed.

Table 5-2 lists the seventeen health knowledge items and give their rank order by the percentage of respondents who gave the correct answer in the pretest, while Table 5-3 shows percentage correct for each item. Clearly, the applicants were most knowledgeable about "the facts of life," with nine out of ten knowing not only length of human gestation and how eggs are fertilized, but also the position of an infant at birth. Surprisingly, the question on where the baby develops was correctly answered by only 40%.

On the whole, the group also appeared knowledgeable on the topic of venereal disease. Nine out of ten males and females knew that a man who feels burning during urination should see a doctor. In addition, four out of five (80%) knew that gonorrhea was a venereal disease and three out of four (74%) knew that VD is spread through sexual intercourse. Less than one of of three (31%), however, was aware that use of a condom is the birth control method which is also capable of preventing the spread of VD. Fully 70 percent of both males and females, however, were aware that the pill was the most effective means of birth control and the one most likely to have side effects.

Nearly two out of three applicants (62%) knew that sickle cell anemia was a hereditary disease which occurs mainly among Blacks. An equal proportion were aware that accidents are the leading cause of death among young people aged 15 to 20.

It is interesting to note that items which had the most to do with everyday life and health care--how to care for your teeth and the type of

Table 5-2

Rank Order of Items by Percentage of Correct Answers

Health Information Scale Items	Pretest Rank	Posttest Rank
Personal Hygiene and First Aid		
Best way to clean your teeth	13	10
Doctor to go to first	14	14
Doctor for female problems	12	12
Purpose of mouth-to-mouth resuscitation	5	6
Leading cause of death among youths	10.5	11
Venereal Disease		
Definition of venereal disease	7	7.5
Identification of a venereal disease	6	5
Treatment for burning urination	3.5	1
Birth control method which prevents VD	17	16.5
Birth Control		
Most effective method of birth control	8.5	9
Method most likely to have side effects	8.5	7.5
Reproduction, Pregnancy and Birth		
Length of normal pregnancy	1	2
Orientation of baby at birth	2	3.5
Where baby develops during pregnancy	16	16.5
What causes egg to be fertilized	3.5	3.5
Adolescent Sexuality		
What is normal for adolescents	15	15
Sickle Cell Anemia		
Cause and afflicted population	10.5	13

Table 5-3

Change in Percentage of Correct Answers on Health Knowledge Items Between Pretest and Posttest for Total Sample

Health Information Scale Items	Percent Giving Correct Response		
	Pretest	Posttest	Difference Posttest-Pretest
Personal Hygiene and First Aid			
Best way to clean your teeth	58	71	13
Doctor to go to first	53	56	3
Doctor for female problems	59	61	2
Purpose of mouth-to-mouth resuscitation	81	79	-2
Leading cause of death among youths	62	63	1
Venereal Disease			
Definition of venereal disease	74	75	1
Identification of a venereal disease	80	81	1
Treatment for burning urination	90	91	1
Birth control method which prevents VD	31	38	7
Birth Control			
Most effective method of birth control	70	74	4
Method most likely to have side effects	70	75	5
Reproduction, Pregnancy and Birth			
Length of normal pregnancy	94	89	-5
Orientation of baby at birth	92	88	-4
Where baby develops during pregnancy	40	38	-2
What causes egg to be fertilized	90	88	-2
Adolescent Sexuality			
What is normal for adolescents	42	46	4
Sickle Cell Anemia			
Cause and afflicted population	62	58	-4

physician to go to for most health problems--were correctly answered by only slightly more than half of the applicants (58% and 53% respectively). The awareness that strong desires for sexual activity and sexual experimentation were natural parts of adolescence was reflected by only two out of five (42%) of the respondents at the time of the pretest.

Table 5-2 also indicates that overall there was little change in the ranking of the individual items on the posttest. Indeed, a Spearman rank order correlation of .94 exists between the pre- and posttest item rankings.

Table 5-3 gives the mean pre- and posttest scores for the entire study sample on each of the 17 health knowledge items, along with the change between the two administrations. The greatest impacts, across the entire sample, tended to occur on those variables where the pretest percentages were lowest. Thus, the greatest improvement was in such items as the best way to care for one's teeth, type of physicians to see for most health problems, and normal adolescent sexuality. Items on which, on the other hand, applicants did best during the pretest were most likely to show a drop in numbers of correct answers (e.g., length of pregnancy, orientation of the baby at birth, etc.). This may suggest that regression towards the mean is a substantial factor in these changes.

5.1.3 Summary

There were no differences among groups of either the pretest or posttest. It must therefore be concluded either that Job Corps had no impact on health information or that this scale was totally insensitive to changes in knowledge.

Given that this scale was developed and tailored specifically to the Job Corps Health Education curriculum, the results suggest that:

- Enrollees, particularly women, are fairly sophisticated about certain health care facts at entry;
- There may be forces outside Job Corps which transmit this knowledge as effectively as the Job Corps Health curriculum.

Although it is possible that the lack of change can be attributed to a ceiling effect or other validity problems, these findings nevertheless imply that the current Health Education program in Job Corps needs a thorough evaluation to determine whether the lack of significant gains found here is a reflection of the actual Job Corps situation.

5.2 Health Care and Health Habits

Health Care and Health Habits is the second in a series of health-related outcomes. Unlike the previous one, which measured change in knowledge, this outcome covered behavioral changes in use of health care services and in personal health practices. It was measured by means of a series of self-report questions. No attempt was made to obtain a thorough health history or to compare responses to center medical records. Questions were limited to those which the respondents could be expected to answer readily and accurately.

Six health care and health habits questions were asked identically on the pre- and posttest. In addition, four questions concerning change in health habits since Job Corps termination (or application, in the case of NoShows) appeared only on the posttest. Findings for the entire sample and for the three groups, by sex, are discussed below.

5.2.1 Pre and Post Items

The first item covered frequency of dental treatment:

Table 5-4
(in percentages)

Pretest-Males

When was the last time you went to the dentist?	Persisters	Dropouts	NoShows	Statistics
In the past year	53	58	47	$X^2 = 2.86$
One to three years ago	25	22	27	df = 6
More than three years ago	14	12	20	p = ns
Never	9	9	7	N = 278

Posttest-Males

When was the last time you went to the dentist?	Persisters	Dropouts	NoShows	Statistics
In the past year	68	54	52	$X^2 = 6.56$
One to three years ago	15	22	23	df = 6
More than three years ago	8	12	16	p = ns
Never	9	12	9	N = 277

Pretest-Females

When was the last time you went to the dentist?	Persisters	Dropouts	NoShows	Statistics
In the past year	56	56	65	
One to three years ago	20	19	9	$\chi^2=5.5$
More than three years ago	19	19	12	df=6 p=ns
Never	6	7	15	N=206

Posttest-Females

When was the last time you went to the dentist?	Persisters	Dropouts	NoShows	Statistics
In the past year	82	56	56	
One to three years ago	11	20	15	$\chi^2=16.09$
More than three years ago	6	19	21	df=6 p=<.01
Never	1	6	9	N=208

On the pretest, over half the total group stated that they had gone to the dentist within the past year, a good proportion in any adolescent population. Furthermore, only 8% overall claimed to have never seen a dentist, a figure considerably lower than is generally assumed for this population. There were no differences among groups for either males or females on the pretest.

Differences on the posttest are significant for women, however. Female Persisters improved 26 percentage points on recent dental visits. Among males there was a non-significant improvement of 15 percentage points for Persisters. Clearly, Persisters received dental treatment between pretest and posttest while Dropouts and NoShows did not. Job Corps policy specifies that dental treatment is available after 90 days' enrollment. This policy explains the differences in the findings; Persisters apparently received dental care in Job Corps. It should be noted, however, that 32% of male Persisters and 18% of female Persisters chose not to take advantage of the availability of dental treatment. Among the male persisters, 9% both before and after Job Corps had never seen a dentist. The percentages for women declined from six to one percent. Nevertheless, these percentages suggest that a certain proportion of the population may lack dental treatment by choice and that its availability is not the issue. It also indicates that at least occasional dental care is received by all adolescents in this population, except for those who don't avail themselves of it even when it is convenient and free, i.e., in Job Corps.

The second question covered another aspect of dental health--restorative work. This item was included in order to assess the need for restorative dentistry in the population and, more importantly, to determine whether the need is met by Job Corps health services.

Table 5-5
(in percentages)
Pretest-Males

Do you have any front teeth missing?	Persisters	Dropouts	NoShows	Statistics
Yes	10	9	9	
No	86	88	89	$\chi^2=.52$
Yes, but I have a replacement	4	3	2	df=4 p=ns N=280

Posttest-Males

Do you have any front teeth missing?	Persisters	Dropouts	NoShows	Statistics
Yes	5	10	5	
No	92	88	96	$\chi^2=4.93$
Yes, but I have a replacement	4	2	0	df=4 p=ns N=278

Pretest-Females

Do you have any front teeth missing?	Persisters	Dropouts	NoShows	Statistics
Yes	6	8	6	
No	90	89	94	$\chi^2=1.85$
Yes, but I have a replacement	4	3	0	df=4 p=ns N=207

Posttest-Females

Do you have any front teeth missing?	Persisters	Dropouts	NoShows	Statistics
Yes	7	10	6	X^2=1.68
No	90	87	94	df=4
Yes, but I have a replacement	3	3	0	p=ns N=205

Overall, almost 90 percent of Job Corps applicants had their natural front teeth intact at the time of the pretest. Of those with missing front teeth, almost four-fifths did not have a replacement. Differences between males and females on this item were small both on the pretest and on the posttest.

A comparison of pre- and posttest scores indicates that there must have been some confusion regarding the proper way to respond to the multiple choice question. For example, among the male NoShows the number answering "yes" went down over time while the number answering "yes, but I have a replacement" also went down. This combination of negative change is impossible in the context of the question; therefore it must have been misinterpreted. The third option was chosen by a handful of respondents on the pretest and a few on the posttest in an apparently random fashion. It is possible that most respondents considered the answer "no" to be appropriate if they they either had their natural front teeth or a false tooth. If the data in the tables are restructured to eliminate those who chose the third option, it appears that Persister and NoShow males received restorative dentistry and Dropouts did not. Among the females there were no changes in any group.

Although the reliability of these data is somewhat suspect, a tentative conclusion can be reached that Persister males, but not females, had restorative dental work done in Job Corps.

The third question in the series covered awareness and treatment of eye problems. "Do you think you might need glasses?" was the phrasing chosen, with "I already wear glasses" as a possible response. It was anticipated that pre-post comparisons would indicate whether Job Corps meets the need for vision correction among its enrollees. It should be noted, of course, that thinking one needs glasses does not insure that an optometrist would agree.

Table 5-6
(in percentages)

Pretest-Males

Do you think you might need glasses?	Persisters	Dropouts	NoShows	Statistics
Yes	13	22	16	
No	73	74	71	$\chi^2=8.75$ df=4
I already wear glasses	14	5	13	p=.06 N=280

Posttest-Males

Do you think you might need glasses?	Persisters	Dropouts	NoShows	Statistics
Yes	22	20	12	
No	71	72	72	$\chi^2=4.29$ df=4
I already wear glasses	8	9	16	p=ns N=277

Pretest-Females

Do you think you might need glasses?	Persisters	Dropouts	NoShows	Statistics
Yes	23	24	27	
No	54	47	65	$\chi^2=6.39$ df=4
I already wear glasses	24	30	9	p=ns N=206

Posttest-Females

Do you think you might need glasses?	Persisters	Dropouts	NoShows	Statistics
Yes	18	30	15	
No	52	48	62	$\chi^2=6.66$ df=4
I already wear glasses	31	22	21	p=ns N=207

On the pretest, over 20% of the applicants thought they might need glasses. Another 15.8% already wore glasses. These percentages did not differ significantly among groups, although the table for males approaches significance, as Dropouts reported the least amount of previous care and the most perceived need for it. Among females, it was the NoShows who were least likely to wear glasses and the most likely to feel they need them. Women in general were more vision-conscious than men.

Results of the pre- post comparison are disturbing. Among Persister males and Dropout females, more thought they needed glasses after Job Corps than before, and fewer reported that they already wear them.* The other two Job Corps groups changed in the opposite, more expected direction. NoShows of both sexes tended to get treatment for vision problems.

These findings indicate that Job Corps served the optometry needs of only a small portion of the enrollees in this sample. The number wearing glasses actually went down over time. Perhaps some of those who failed the vision test at entry did not want to get glasses, and after Job Corps they realized that they did indeed need them. The vision consciousness of NoShows may be a product of their employment during this period (and consequent ability to pay for glasses).

Another unexpected finding in the analysis of this item was a sex difference, on both the pretest and posttest, within the two Job Corps groups. Males were much less likely than females to feel they needed glasses or to be already wearing glasses. This difference was highly significant for Persisters (Pretest: $X^2 = 6.83$; df = 2; p = <.03. Posttest: $X^2 = 16.3$; df = 2; p = <.0003) and for Dropouts (Pretest: $X^2 = 29.5$; df = 2; p = <.0001. Posttest: $X^2 = 14.67$; df = 2; p = <.0007) but not for NoShows (Pretest: $X^2 = 2.3$; df = 4; p = ns. Posttest: $X^2 = 1.6$; df = 4; p = ns). Interpretation of this finding seems difficult at first. Why should vision-conscious women and nonvision-conscious men show up for Job Corps so reliably? Why didn't more of the women get glasses in Job Corps, since they were aware of their needs?

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*Unless a large number of people lost their glasses in Job Corps, this combination of responses (more need glasses and fewer wear them) might be another case of item misinterpretation.

A partial explanation may lie in the different expectations for training of the two sexes. Most women who enter Job Corps hope to get training in secretarial skills, keypunching or health occupations, all of which require extensive reading. Most men, on the other hand, look toward blue collar occupations such as construction trades, auto mechanics, and machine repair. These require little reading on the job, although the training programs include classroom work. The men were probably less concerned with vision problems both before enrollment and while on center. The women were concerned both before and after Job Corps, but did little about it. NoShows, who did not enroll, did not display these sex differences. They were the only group to improve substantially, however.

That the same proportion of women felt that their vision needed correction after Job Corps as before must be considered an indictment of the optometry services offered to this group. Further examination of center medical practices to determine whether this apparent deficiency prevails currently seems warranted.

Another pair of questions asked both on the pretest and the posttest concerned height and weight. One purpose of the question was to determine the self-knowledge of such personal data among the sample. The difficulties in analysis of the two previously discussed questions requesting self-reports of health data have indicated that youngsters in the sample had trouble either answering or understanding such questions. The results of the height question were therefore used as an additional check on self-knowledge.

An analysis of individuals' height changes was made. Since there were no records which could verify their self-reports, the method chosen to examine this issue was a pre-post analysis of self-reported height. Since a decrease in height is physiologically unlikely among this population, any reported decreases even small ones, must be considered errors. The table below illustrates the findings:

Table 5-6
(in percentages)

N = 489	Persisters	Dropouts	NoShows
Decreased in height one inch	8	11	9
Decreased in height more than one inch	10	8	4

These figures imply that 13 to 18 percent of respondents reported inaccurate personal information on either the pretest or posttest. It can therefore be assumed that gains in height and changes in weight were also inaccurately reported by at least an equal proportion of respondents. The data available, however, did not permit detection of these.

A second reason for asking for height and weight on the pretest and the posttest was to determine the impact of Job Corps on youth who were overweight or underweight at time of entry. However, to perform this analysis, it was necessary for us to define thresholds of underweight and overweight. For purposes of this study, these were defined as twenty pounds over or under the average weight for each height for this age group.* The percentage of respondents in each of the three weight categories, as defined actuarily, is shown separately for males and females, pre- and posttest, below:

Table 5-7
(in percentages)

Pretest-Males

	Persisters	Dropouts	NoShows	Statistics
Overweight	13	4	14	$X^2=6.84$
Normal	68	78	72	df=4 p=ns
Underweight	19	18	14	N=266

Posttest-Males

	Persisters	Dropouts	NoShows	Statistics
Overweight	14	6	9	$X^2=4.18$
Normal	74	79	79	df=4 p=ns
Underweight	13	15	12	N=270

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*An actuarial table of average heights and weights by age was used.

Pretest-Females

	Persisters	Dropouts	NoShows	Statistics
Overweight	29	20	21	X^2=3.71
Normal	68	76	79	df=4 p=ns
Underweight	3	4	0	N=202

Posttest-Females

	Persisters	Dropouts	NoShows	Statistics
Overweight	29	24	21	X^2=4.2
Normal	69	75	74	df=4 p=ns
Underweight	1	1	6	N=203

About three fourths of both males and females tended to weigh in the normal range for their height. The other 25% was divided differently within male and female subgroups; very few women were underweight, while 12-19% of men were underweight. Persisters, both male and female, were most likely to be overweight. There were no major changes in any group from pretest to posttest, and there were no significant differences among groups.

A separate question was asked to measure awareness of weight problems and to serve as a baseline for changes in weight. The data were analyzed in two ways. First we present the basic findings separately for males and females.

Table 5-8
(in percentages)

Pretest-Males

Do you consider yourself underweight, overweight, or normal?	Persisters	Dropouts	NoShows	Statistics
Overweight	11	8	7	X^2=1.56
Normal	69	72	69	df=4 p=ns
Underweight	20	21	24	N=266

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Posttest-Males

Do you consider yourself underweight, overweight, or normal?	Persisters	Dropouts	NoShows	Statistics
Overweight	15	6	12	$X^2=5.52$
Normal	71	75	75	df=4 p=ns
Underweight	14	19	14	N=270

Pretest-Females

Do you consider yourself underweight, overweight, or normal?	Persisters	Dropouts	NoShows	Statistics
Overweight	34	28	29	$X^2=1.4$
Normal	44	50	44	df=4 p=ns
Underweight	22	22	27	N=202

Posttest-Females

Do you consider youself underweight, overweight, or normal?	Persisters	Dropouts	NoShows	Statistics
Overweight	34	26	35	$X^2=2.32$
Normal	51	55	44	df=4 p=ns
Underweight	16	20	21	N=203

The above tables present some interesting findings. There were few changes in self-evaluation of weight among either males or females. The trend in both groups was for underweight to be reported less frequently at the time of the posttest, but in no case was the change more than nine percentage points. The most notable difference, however, is between males and females. A full three-quarters of males considered themselves normal, while only half the females felt this way. Since the tables in the section on actual weight indicate that about 75% of females in the sample were of normal weight, this phenomenon may be a reflection of a poor self-image on the part of the women surveyed. What is interesting is that most of the incorrect perceptions of women concerned underweight, that is, women who were normal thought they were underweight. This perception/actuality disparity cut across treatment groups and was retained on the posttest.

Another way of pointing out the disparity is to compare the proportion of correct weight evaluations across groups and between sexes. Tables like the one below were generated for each sex x group x time period set of scores. (For example, female Persisters on the pretest). There were a total of twelve tables in all. (They are not reproduced because of lack of space).

ACTUAL WEIGHT

		Overweight	Normal	Underweight
PERCEIVED WEIGHT	Over-weight			
	Normal		X	
	Under-Weight			

The proportion of scores in the middle box was used as an indication of the percentage of respondents who correctly perceived that they were of normal weight.

Correct assessments of normal weight among males (i.e., normal actual weight and normal perception) ranged from 74% (NoShow males on pretest) to 82% (NoShow males on posttest). Correct assessments of normal weight among females, however, ranged only from 52% (NoShow females on posttest) to 67% (Persister females on posttest). The proportion of female Persisters making correct assessments increased seven points from pretest to posttest, while other groups did not change. Among males, Persisters increased four points, while Dropouts did not change and NoShows increased eight points.

The problem of poor self-image among women has become accepted by many employment and training programs as a significant barrier to employment success. Many programs offer group counseling and assertiveness training to help women feel confident in their abilities. The findings discussed above seem to indicate that self-image was a problem among these Job Corps women and that Job Corps training impacted Persisters but not Dropouts.*

5.2.2 Posttest-Only Items

A number of questions were asked to all respondents on the posttest regarding perceived changes over time in their health habits. Issues of general health, smoking, drinking and physical appearance were covered.

The first issue was general health:

Table 5-9
(in percentages)

Males

Since my Job Corps experience ended, my health has:	Persisters	Dropouts	NoShows	Statistics
Become better	30	34	17	$X^2 = 4.45$
Stayed about the same	65	61	78	df = 4 p = ns
Become worse	5	6	5	N = 268

Females

Since my Job Corps experience ended, my health has:	Persisters	Dropouts	NoShows	Statistics
Become better	27	26	44	$X^2 = 4.99$
Stayed about the same	64	62	44	df = 4 p = ns
Become worse	9	12	13	N = 202

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*Similarly, on the ten item measure of self esteem discussed in Chapter 4.2, female Persisters were the only group to make significant gains.

From the table above, it can be concluded that Job Corps had a positive (non-significant) impact on the health of males but not females. There are two other notable findings here. One is that females reported more negative changes than males. The second notable finding is that while NoShow males felt they had changed little, NoShow females reported the most change of any group. In each case, however, more than three times as many respondents felt their health had improved than felt that their health had declined.

The second question concerned smoking behavior:

Table 5-10
(in percentages)

Males

Since my Job Corps experience ended, my smoking habit has:	Persisters	Dropouts	NoShows	Statistics
Become better	17	15	10	$x^2 = 2.07$
Stayed about the same	52	57	63	df = 6 p = ns
Become worse	12	10	12	N = 269
I never smoked	19	18	15	

Females

Since my Job Corps experience ended, my smoking habit has:	Persisters	Dropouts	NoShows	Statistics
Become better	17	23	22	$x^2 = 9.54$
Stayed about the same	38	49	47	df = 6 p = ns
Become worse	20	7	19	N = 203
I never smoked	25	21	13	

An interesting though not significant finding here is that NoShows, both male and female, reported the most harmful tobacco habit. "Become better" and "I never smoked," combined, covered only 25% of the NoShow males and 35% of the NoShow females. These figures were lower than those of any of the Job Corps groups. For the sample as a whole, only about 20% have never smoked. The best post-program profile was recorded by the female Dropouts, who improved the most and declined the least.

A similar question was asked about drinking:

Table 5-11
(in percentages)
Males

Since my Job Corps experience ended, my drinking habit has:	Persisters	Dropouts	NoShows	Statistics
Become better	15	19	12	
Stayed about the same	37	35	51	$\chi^2 = 5.04$
Become worse	6	7	2	df = 6 p = ns
I never drank	43	40	34	N = 268

Females

Since my Job Corps experience ended, my drinking habit has:	Persisters	Dropouts	NoShows	Statistics
Become better	17	16	13	
Stayed about the same	25	25	28	$\chi^2 = 2.46$
Become worse	0	2	0	df = 6 p = ns
I never drank	58	57	59	N = 203

On this item, responses may not accurately reflect the condition of the sample. Because of the wording of the question, a moderate drinker who did not change would have been confused as to whether option #2 or option #4 was the proper response. To some, "my drinking habit" may have implied previous alcohol abuse (hence a #4 response by a moderate drinker), while to others the phrase may have implied any use of alcohol (hence a #1, #2 or #3 response by a moderate drinker).

Under these circumstances, it is safe to examine only the "became better" and "became worse" responses. Unfortunately, the three groups showed virtually no differences among males or females. It must therefore be tentatively concluded that Job Corps has no impact on the drinking habits of former enrollees.

The last question in this series asked about changes in physical appearance:

Table 5-12
(in percentages)

Males

Since my Job Corps experience ended, my physical appearance has:	Persisters	Dropouts	NoShows	Statistics
Become better	47	41	37	$X^2 = 5.22$
Stayed about the same	52	51	59	df = 4 p = ns
Become worse	2	8	5	N = 268

Females

Since my Job Corps experience ended, my physical appearance has:	Persisters	Dropouts	NoShows	Statistics
Become better	52	38	44	$X^2 = 3.95$
Stayed about the same	39	55	47	df = 4 p = ns
Become worse	9	7	9	N = 202

In terms of physical appearance, Persisters of both sexes reported the most positive change. In addition, two of the three female groups (Persisters and NoShows) reported more positive change than the men in their groups. This finding somewhat contradicts those found in terms of self-assessment of weight, in which women with normal figures tended to see themselves as overweight or underweight, while men were more realistic. It should be noted, however, that female Persisters improved in their perceptions of weight. Their positive orientation toward their physical appearance may have been a reflection of this better attitude.

5.2.3 Conclusions

Job Corps seemed to have had a positive impact on the health habits and health care of Persisters in the areas of dental care (routine and restorative), accurate perception of normal weight and physical appearance. Positive impacts accrued to Dropouts in smoking habit and general health. None of the groups changed their figures over the pre-post time period.

The tendency of women to perceive themselves as overweight or underweight may be interpreted as a problem of poor self-image. Persisters improved in this area over time, however.

The lack of optometry care received by the Job Corps groups appears to reflect a deficiency in the health services provided to these respondents. In sum, Job Corps had a moderate impact on both Persisters and Dropouts.

5.3 Nutrition

The learning of proper eating habits and the basics of good nutrition was seen as an important noneconomic impacts of the Job Corps by both the Job Corps staff and the Abt Associates research team. In order to assess the possible impact which the Job Corps training had on trainees' nutrition habits and knowledge, three indicators were used. Taken together, these three provide a picture of the impact which the Job Corps had on these trainees' orientation towards good nutritional habits.

5.3.1 Selection of a Balanced Diet

The first indicator, originally developed for an evaluation of the "Mulligan Stew" program on educational television, is a quasi-behavioral index of the respondent's likelihood of selecting a balanced diet during an average day. The instrument asks the respondent to select up to five foods out of a possible 42 (including one self selection) which the respondent would like to eat for a particular meal on the following day (see Figure 5-1). The selection process is repeated for breakfast, lunch, dinner and a snack. The responses are converted into food groups, summed across the four "meals" and scored against an ideal "balanced diet" composed of four foods from the bread and cereals group, four fruits and vegetables, two from the milk and cheese and two from the meats group.*

The results, shown in Table 5-13, indicate that, on the pretest, respondents were fairly good at selecting a balanced diet. Pretest-posttest changes, however, were slight, and only the Persister group showed a significant increase in the balanced diet score. The Dropout women actually

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*The scale was scored by analyzing the food groups of the 20 foods chosen on the instrument. A perfect 4-4-2-2 profile or better scored a 12. Each group deficiency reduced the score by a point.

Figure 5-1
Item From the "Mulligan Stew" Instrument

BREAKFAST

Put an "X" on each of the foods you would like to have for BREAKFAST tomorrow. (up to five)

1.6. For BREAKFAST I would like to have . . .

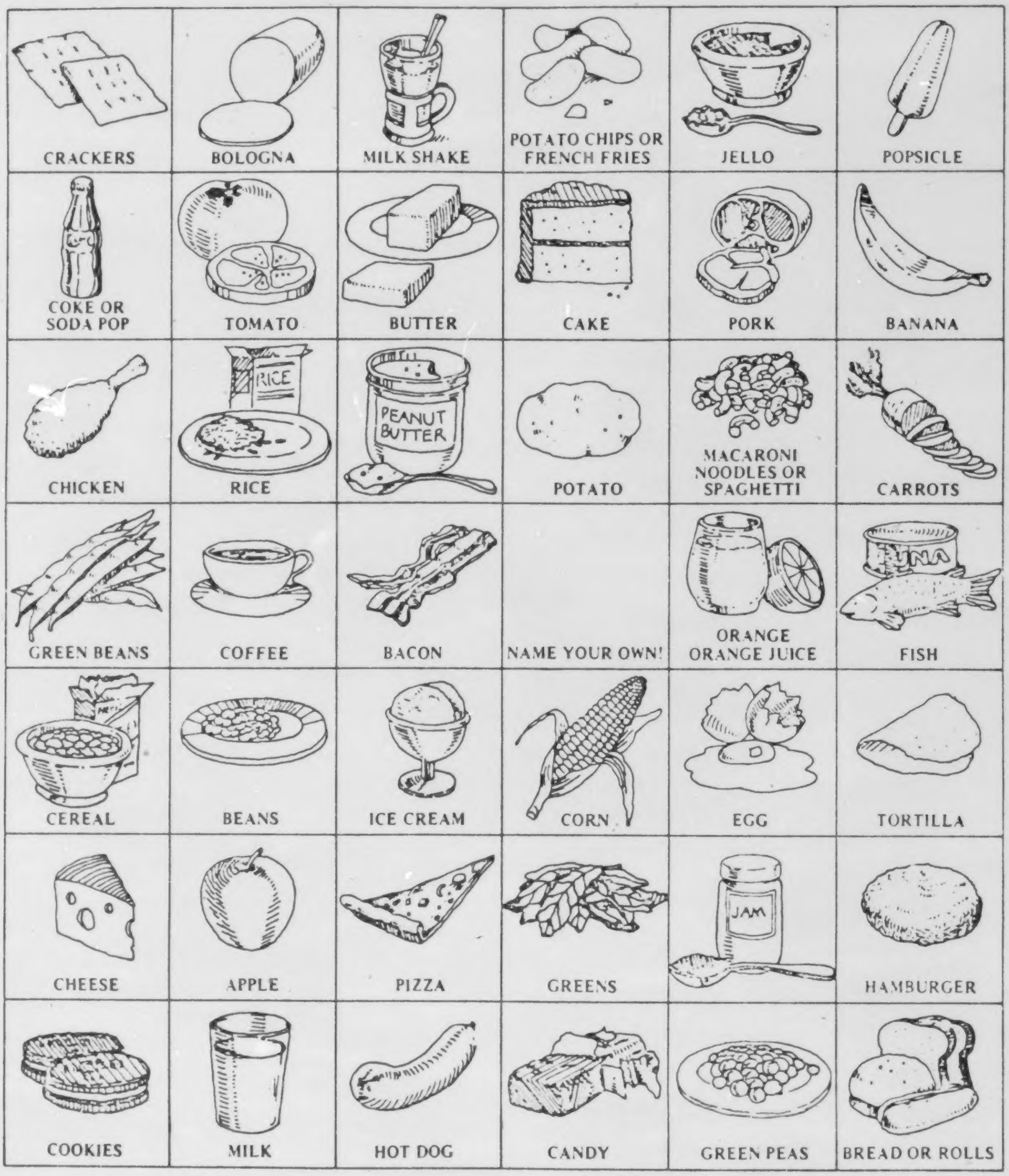

Table 5-14

CHANGES IN: SELECTION OF A BALANCED DIET SCALE SCORES
By SEX AND TREATMENT GROUP

Treatment Groups	Mean Pretest Score	Mean Posttest Score	Mean Difference Score	N	Difference Score t
Persisters	9.30	9.71	.42	154	2.05*
Males	9.57	9.92	.36	90	1.45
Females	8.92	9.42	.50	64	1.42
Dropouts	9.68	9.65	-.03	194	.15
Males	9.79	10.12	.33	104	1.13
Females	9.56	9.12	-.43	90	1.51
Noshows	9.28	9.48	.20	71	.49
Males	9.51	9.76	.24	41	.50
Females	8.97	9.10	.13	30	.20

Significant F tests: Between sexes on the posttest (overall and Dropouts)
F = 14.21***/10.69***

Possible range: 0-12

*p = < .05
**p = < .02
***p = < .01

showed an almost significant decline in their approximation of a balanced diet, with women significantly lower than men on the posttest. These findings suggest, then, that the Job Corps did have a positive impact on the dietary orientation of men and women who stayed for at least three months. The decrease for female Dropouts parallels other findings which indicate that this group was negatively impacted by Job Corps.

5.3.2 Ratio of "Junk Food" to Wholesome Food in the Diet

A second score which was derived from the Mulligan Stew instrument consisted of the computed ratio of selections made of "junk foods" (e.g., candy, cookies, cake, etc.) to nutritious foods.* This ratio indicates the degree to which the respondents select wholesome foods over the more popular, but less nutritious, "junk" foods. Here, a decline in score indicates an improvement, that is, a decline in the number of junk foods chosen relative to the number of wholesome foods selected. Table 5-14 shows that, as with the balanced diet index, the Persister group showed a significant improvement in the "Junk Food Ratio" whereas there were no significant changes in the other groups. Improvement by Persisters was primarily attributable to changes on the part of females, who started out with the worst ratio. Female Dropouts again showed the least positive scores; they were the only group which got worse.

5.3.3 Changes in Nutritional Information

The third source of nutritional measurement was the Nutritional Information Scale, developed to test the enrollee's general knowledge of nutrition. At the pretest, all three groups were essentially alike (see Table 5-15). However, comparisons of the pre- and posttest scores indicate that the NoShows improved significantly on the posttest, whereas there were no significant changes in either the Dropouts or the Persisters. This finding appears to conflict with the previous two findings, which showed significant improvement among the Persisters and not among other groups. One possible explanation for this apparent inconsistency is that substantially more NoShows (44%) had gone back to school during the pretest/

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*The scale was scored by summing all junk foods chosen from the total of 20 and dividing that number by the total of nutritious foods chosen.

Table 5-15

CHANGES IN: RATIO OF JUNK FOOD TO WHOLESOME FOOD SCALE SCORES

By SEX AND TREATMENT GROUP

Treatment Groups	Mean Pretest Score	Mean Posttest Score	Mean Difference Score	N	Difference Score t
Persisters	.39	.34	-.05	154	2.07*
Males	.33	.33	-.01	90	.39
Females	.46	.36	-.10	64	2.17*
Dropouts	.36	.35	-.01	194	.37
Males	.35	.32	-.03	104	.94
Females	.37	.38	.01	90	.22
Noshows	.38	.33	-.05	71	1.11
Males	.36	.34	-.02	41	.34
Females	.41	.32	-.09	30	.39

Possible range: 0-19

*p = <.05
**p = <.02
***p = <.01

Significant F ratios: Between sexes on the pretest (overall and Persisters)
F=6.21**/8.67***

Table 5-16

CHANGES IN: NUTRITIONAL INFORMATION SCALE SCORES

By SEX AND TREATMENT GROUP

Treatment Groups	Mean Pretest Score	Mean Posttest Score	Mean Difference Score	N	Difference Score t
Persisters	2.54	2.56	.02	165	.21
Males	2.39	2.48	.10	100	.71
Females	2.77	2.68	-.10	65	.68
Dropouts	2.61	2.62	.01	220	.10
Males	2.60	2.52	-.07	121	.64
Females	2.64	2.74	.10	99	.79
Noshows	2.49	2.85	.36	73	2.02*
Males	2.59	3.02	.43	44	1.91
Females	2.35	2.59	.24	29	.85

Possible range: 0-5

*p = .05
**p = .02
***p = .01

Significant F ratios: Among groups on the posttest (Males only) F = 3.96*
Between sexes on the pretest (Persisters only) F = 4.45*

posttest interval than either the Persisters (31%) or the Dropouts (25%), (see Chapter 5.4). The more academic environment of school may have increased the NoShows' factual knowledge of nutrition, although it apparently had no behavioral effect. On the other hand, the Job Corps training experience had its impact on the more behavioral components.

5.3.4 Conclusions

Nutritional behavior of Persisters improved significantly over time, while that of Dropout women declined slightly. As noted before, Dropout women seem to have been adversely affected by Job Corps on a number of outcomes. In nutritional knowledge, the patterns were different, with NoShows making the most improvement. This parallels the findings on Health Information, discussed in the previous section, where NoShows made the most improvement and Dropouts declined. It is encouraging for Job Corps that those who stayed at least three months improved in behavior, even if their factual knowledge did not increase. Behavior, after all, is what counts in nutrition.

5.4 Educational Attainment

Four items examined the educational attainment of the study's participants:

- level of education at entry into Job Corps
- whether the respondent received a GED in Job Corps
- whether the respondent has returned to school since Job Corps
- whether the respondent is currently in school

Although the study, when it was originally designed, was intended to measure changes in reading and math skills, this part of the outcome was dropped when Job Corps discontinued its testing program for terminating enrollees.

5.4.1 Level of Education at Entry Into Job Corps

Data on educational level at entry were taken from Job Corps records. Comparisons of the two treatment groups for whom data were available (Persisters and Dropouts) yielded no significant differences (see Table 5-17). Analysis between sexes, however, revealed that females, both Persisters and Dropouts, had completed significantly more schooling that the males. For example, 17% of female Persisters had completed high school as

Table 5-17

Level of Education at Entry into Job Corps
(in percentages)

	Persisters	Dropouts	Statistics
Eighth grade or less	16	18	$X^2 = 1.98$
Ninth grade	36	35	df = 4
Tenth grade	31	26	p = ns
Eleventh grade	7	11	N = 310
Twelfth grade	10	10	

Table 5-18

Level of Education at Entry Into Job Corps By Sex for Each Treatment Group*
(in percentages)

Dropouts

	Males	Females	Statistics
Ninth grade or less	61	42	$X^2 = 16.88$
Tenth grade	26	26	df = 6
Eleventh grade	10	12	p =<.0097
Twelfth grade	3	7	N = 173

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*Data were not available for NoShows

Persisters

	Males	Females	Statistics
Ninth grade or less	60	42	$X^2 = 16.46$ df = 5 p =<.0056 N = 146
Tenth grade	33	28	
Eleventh grade	4	12	
Twelfth grade	4	17	

compared with 4% of male Persisters. Substantially more male Persisters (60%) had only finished ninth grade or less as compared with female Persisters (42%). These findings are displayed in Table 5-18.

The fact that women had significantly more education than men may help explain their tendency to do better, on both the pretest and the post-test, on tests of factual knowledge (Health Information, Nutrition Information, Job Knowledge).

5.4.2 Receipt of GED in Job Corps

One of the major benefits which Job Corps offers is the opportunity for an enrollee to study for and pass the test for a GED (high school equivalency diploma). Because 90% of the enrollees were high school drop-outs, it was expected that a large number would be enrolled in a GED course. Table 5-19 displays the findings of this comparison:

Table 5-19

Attainment of GED During Job Corps Stay
(in percentages)

Males

	Persisters	Dropouts	Statistics
Eligible but not enrolled	11	21	$X^2 = 9.40$ df = 1 p = ns N = 32
Ineligible	89	79	

Females

	Persisters	Dropouts	Statistics
Passed GED	4	0	$X^2 = 16.63$
Enrolled but not Completed	19	3	df = 3
Eligible but not Enrolled	62	90	p =<.0008
Ineligible	15	7	N = 121

Findings are disappointing. As illustrated in Table 5-19, the vast majority of male participants were ineligible for GED classes, and eligible women tended not to enroll. Persister women were significantly more involved in getting GED's than Dropout women; 23% enrolled or passed vs. 3%. There were no significant differences for males. The sample for males was small because, for some reason, the Job Corps data file from which these figures were taken was incomplete on this item.

Apparently, most Job Corps enrollees either did not score high enough on achievement tests or stay long enough to enroll in GED classes. Only two Corpsmembers received GED's; both were female Persisters.

5.4.3 Student Status at Posttest

More than a third of the total group had returned to school since Job Corps involvement ended. Among both males and females, the NoShow group contained the largest proportion of students. This is understandable when the time scale is taken into account. Persisters and Dropouts were posttested only four months after they terminated from Job Corps. Depending on the time of year, it is possible that many posttests were given before a new school semester had even begun. The NoShows, after ten months, had had a far greater opportunity to return to school.

Another application of these data is the speculation that a number of NoShows failed to enroll because they went back to school. In Chapter 3.4 it was pointed out that NoShows worked more than those who attended Job Corps. It could be that Job Corps enrollment took place only if attempts at employment and education failed. Those who succeeded in one or the other did not enroll.

Table 5-20

Has Returned to School Since Job Corps
(in percentages)

Males

	Persisters	Dropouts	NoShows	Statistics
Has Returned to School	30	25	40	$X^2 = 3.24$
Has Not Returned	70	75	60	df = 2 p = ns N = 266

Females

	Persisters	Dropouts	NoShows	Statistics
Has Returned to School	32	25	50	$X^2 = 7.05$
Has Not Returned	68	75	50	df = 2 $p < .05$ N = 204

The final topic covered here is whether the respondent was currently in school, full-time, or part-time. Findings were almost identical for men and women and followed the same pattern as employment status findings. Job Corps apparently did not impact current school status. About three-quarters of all respondents were not in school at the time of posttest. Dropouts, male and female, were somewhat less likely than members of the other two groups to be in school. Female NoShows, as in the previous item, were in the largest in-school group. What is interesting, however, is that while 50% of female NoShows claimed to have returned to school (Table 5-21), only 39% were actually in school at the time of the posttest. This discrepancy parallels that discussed in Chapter 3.4 on employment status. Perhaps NoShow women's school behavior paralleled their employment behavior, with both beginning strong and growing weaker.

Table 5-21

Current Student Status
(in percentages)

Males

	Persisters	Dropouts	NoShows	Statistics
Currently Fulltime Student	14	13	20	$X^2 = 3.29$ df = 4 p = ns N = 269
Currently Parttime Student	16	10	10	
Not Now a Student	71	78	71	

Females

	Persisters	Dropouts	NoShows	Statistics
Currently Fulltime Student	14	15	18	$X^2 = 5.13$
Currently Parttime Student	14	8	21	df = 4 p = ns
Not Now a Student	72	77	61	N = 206

5.4.4 Conclusions

Women reported the most promising behavior in the education area. They entered Job Corps with a better educational background, they gained more in Job Corps, and they attended school somewhat more often after Job Corps. Among the Job Corps participants there were no differences between Persisters and Dropouts except in GED attainment, which requires a longer length of stay.

5.5 Summary: Health and Educational Impacts

In this area of study it can be concluded that the impact of Job Corps was moderate to good. Gains were not made in knowledge of either health or nutrition. Behavioral gains, however, were recorded for Persisters in both these areas. For example, more Persisters had gone to the dentist recently at the time of the posttest, and Persisters chose less junk food and a more balanced diet at the time of the posttest. Dropouts and NoShows did not improve in these areas.

The findings of this study indicate that the Job Corps health program had positive impacts on this sample. Two areas of weakness, however, seemed to be the health education program and the optometry services.

The improvement of Persister women from worst to best on the two nutrition behavior scales is particularly encouraging, since many of these women already had children who would benefit from these changes.

The most notable educational finding was that few Job Corps enrollees were even eligible for GED classes, much less for the diploma. No measure of educational gains in Job Corps was made, however, because such data were unavailable. Those who had attended Job Corps were no more likely than the comparison group to be enrolled in school at the time of the posttest.

6.0 THE HEALTH SERVICES SUBSTUDY

6.1 Background

When the noneconomic impacts study of Job Corps was first conceived, it was envisioned as complementary to the economic impact studies previously performed. While the economic studies measured Job Corps' impact in terms of placement rate and starting wages, the noneconomic impacts study would measure it in terms of eyeglasses dispensed, cases of venereal disease cured, and number of drug abuse cases ameliorated. The emphasis would be on quantifying (and perhaps monetizing) those benefits of Job Corps which had not been measured before.

By the time the original idea had become an RFP mailed out for competitive bid, however, the emphasis on quantifying material benefits had given way to a broader purpose--the development and application of a set of self-report instruments to measure outcomes such as social attitudes and self-esteem. When the final design of the study was completed, in fact, no data sources other than the corpsmembers (and comparison group members) themselves were planned, thus removing the possibility of a detailed accounting of health department records.

After the contract was awarded, the government Project Officer asked that it be modified to include a substudy of tangible benefits covering the area of health services. The Health Service in each Job Corps center offers youngsters high quality medical and dental care, on a preventive and emergency, as well as routine, basis. The purpose of the substudy was to ascertain if Job Corps had health impacts on this sample of participants. Job Corps records indicate that about one-half of Job Corps enrollees are receiving welfare support at the time of enrollment,* and, therefore, are eligible for welfare-supported medical services. If this study were to indicate that Job Corps helps to relieve some of that medical services burden from the welfare system, or that the program makes it easier for participants to receive medical attention, then, Job Corps could be assumed to be providing a substantial benefit. If the study were to indicate that Job Corps provides medical services to its participants that they might not otherwise receive (especially those without access to welfare-supported services), then these are clearly further benefits of the program.

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*Job Corps in Brief, 1976.

At first, the Abt Associates project staff hoped to use the medical records of youngsters in the sample as a separate data source. Information from medical records would form an outcome--Health Services--which could be examined in relation to the outcomes measured by means of the instrument battery. A serious problem for the design of the sub-study, however, was the confidential nature of medical records. Health services staff at centers do not permit divulgence of medical information, and, after Corpsmembers terminate, records are sealed before being stored. The problem thus lay in how to collect medical data on the Corpsmembers in the study without violating medical confidentiality. One possibility would have been to hire medical record librarians to visit Regional Offices and copy information on youngsters in the study from the medical records of recent terminees. This plan was dropped for several practical reasons and because there were still issues of confidentiality. A second suggestion was that health data be collected only on a self-report basis, as a supplement to the basic instrument battery. This idea was rejected on the grounds that Job Corps applicants might not be aware of the basic information concerning their own condition of health, and self-reports would therefore be incomplete and possibly inaccurate.

After these two plans had been rejected, it was decided that the only way to collect health information on Corpsmembers without violating confidentiality would be by using aggregate, anonymous data. All parties were aware that this system did not permit medical record information to be correlated directly and individually with responses to the instrument battery, and therefore the idea of comparing health services received with changes in other non-economic variables had to be abandoned.* Instead, a small incidence and prevalance study was designed to be complete within itself. Aggregate data would be gathered on the prevalence of a limited number of disorders and on the incidence of all disorders serious enough to prompt a visit to the health office. Since aggregate data must still be collected individually and is subject to the problems of confidentiality, a method was devised to permit gathering of data on the specific youngsters in the study without making it identifiable outside of Job Corps. Abt Associates provided data collection forms to each Job Corps health office, each form bearing the name of a participant in the main study. The name was written on a tearoff sheet, however, so that after the data were entered on the form the name could be removed. This system permitted data collection from a specific group without abridging confidentiality.

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*A few questions on health were added to the instrument battery to serve as a limited source of pretest-posttest comparison (see Chapter 5.2 for these findings).

The procedure developed therefore relied on the health staff of each center to collect the data. The drawback to this system lay in the extra workload that was imposed on center health staff. The Job Corps National Health Director pledged that center staff would cooperate if they were trained in the proper use of the forms. Abt Associates staff therefore arranged to meet with the health staff in each center before asking them to complete the research forms. Because staff visits to centers could not be made as early as planned, the start of data collection was somewhat delayed. Some youngsters in the study, therefore, terminated before the data collection system had been introduced in their centers. There was, however, no systematic bias from the difference in inauguration times from center to center or in the enrollees who terminated too early to be included in the substudy.

6.2 Data Collection Methodology

Collection of the data for the health services substudy followed a precise sequence of steps. When a notice of Corpsmember arrivals reached Abt Associates, the list was scanned for names of youngsters who had completed the pretest and become part of the main study. For each such youngster on the list, a blank medical data-collection form was prepared with the name of the new enrollee printed on a tearoff sheet. The form was then mailed to the health office of the appropriate center. The form remained in the center health office until the enrollee's termination, when the relevant data from the medical record were copied onto the forms, the identifying tearoff sheet removed, and the form sent to Cambridge project headquarters.

The form consisted of two parts. The first two pages included a list of some of the disorders which are screened for on the Job Corps entrance physical exam. Entries on this part of the form became data for the prevalence study. Pages 3 and 4 consisted of blank lines and boxes to be filled in each time the participant visited the health office. The number and type of these entries became data for the incidence study.

Abt Associates staff instructed a member of the health staff at each center in the above procedures. In most cases, the center medical director selected a nurse as the person responsible for keeping track of filling out and mailing in the forms. There was a continuous flow of mail back and forth, as blank forms for new arrivals were sent from Abt Associates headquarters and completed forms for terminees were returned.

6.2.1 Data Points

The objective of the prevalence study was to determine the health condition of enrollees at entrance. The choice of disorders, however, was guided by practical as well as research considerations. Because confidentiality required that all recording be done by center health staff, emphasis was placed on brevity and simplicity in data collection. Thus hard-to-define disorders, such as "emotional problems" or "overweight," were not included because of the likelihood of diagnostic inconsistencies from center to center. Standardization of normal and abnormal readings on various examinations was achieved by including on the form the level or finding defined by Job Corps' National Health Office for purposes of this study as abnormal. Only disorders specifically screened for in the entrance physical exam were included in the prevalence study. The disorders chosen to be examined were those that the National Job Corps Health staff felt, from other evidence, were either widespread, pervasive but undetected, or incorrectly rumored to be widespread. Obviously, a complete health profile was not obtained on the form.

The objective of the incidence study was to obtain data on the incidence of symptoms serious enough to induce Corpsmember-initiated visits to the center health office. Symptoms or disorders prompting the visit were to be determined, and followup data were to be gathered in this component of the medical substudy.

6.2.2 Data Collection Forms

Six laboratory tests and two examinations performed at the time of the enrollee's initial physical were listed on the form (see Figure 6-1 for a reproduction of the form). Noted next to each of the eight tests was the quantitative level which equaled a positive reading, then a series of columns where further information was to be entered if the reading reached that level. For each positive finding, further questions were:

- Was the condition confirmed?
- Was a clinical diagnosis entered of ____?
- Was a return visit recommended?

- Was a return visit made?
- Was any medication given?
- Were other treatments given? (Specify)

Confirmation is considered important in medical practice in four of the eight disorders. *The diagnosis* column was included because the National Office Health staff wanted to know whether formal diagnoses were generally made when positive readings were recorded. The question about *return visits* was included to determine whether center health staff request followups, and to form a baseline against which to measure the response to the next question, "*Was a return visit made*?" From this pair of questions, the percentage of patients returning when recommended could be determined. The questions about *medication and other treatment* were included to compare individual center practices in the treatment of disorders discovered on the initial physical exam.

Data for the incidence study were collected on page three of the form (see sample, Figure 6-1). The date of the visit to the health office and the symptom or diagnosis were recorded in the first two columns. The four following columns corresponded to the final four columns in the prevalence study, i.e., return visit recommended, return visit made, medication given, other treatments given. Health office staff were instructed to list every Corpsmember-initiated contact.

6.3 The Provision of Health Care and Health Education at Job Corps Centers

Before the results of the health services substudy are discussed, it is important that some background information on the Job Corps health care system be provided. As indicated above, visits were made to each of the seven centers to instruct center health office staff in the procedures for completing the substudy data collection forms. As part of that meeting, a discussion was held with one or more representatives of the health office and with the health education teacher regarding health office policies, center health education policies, and the opinions of staff on a number of health-related topics. This section offers a general outline of the role of the health staff, the health office, and the health teacher in different centers, in order to set a context for the medical records findings of the medical substudy, discussed in Section 6.3 below. All information was current at the time of the visits (1976), but may have changed since then.

Figure 6-1

Medical Substudy Data Collection Form

JOB CORPS NATIONAL HEALTH SURVEY

This health survey of a sample of Job Corps members is part of a larger national study being carried out for Job Corps by Abt Associates to study the impacts of Job Corps on corps members. You are requested to complete the attached health record abstract form for the member whose name is given below.

In order to identify the corps member to you, but to preserve his or her anonymity regarding the information which you supply, the corps member's name is written below. This front page is to be torn off before you return the completed form to Abt Associates, thus preserving the corps member's anonymity.

The attached health record abstract form has been designed so as to require a minimal amount of time and effort to complete. Most of the information which is requested can be gathered from Form SF-88 and Form SF-93 in the corps member's medical file. Page 1 and most of Page 2 of this abstract form requires information from Form SF-88. On Page 1 in the left hand column, the appropriate item number from SF-88 is referred to. The next column lists the test or examination which is covered by that item. In the next column, if the test finding was abnormal as stated, check Y_ (Yes), and continue to the next column; but if it was not as stated, check N_ (No), and go on to the next item. If you checked Yes, the next column asks if the condition was confirmed. Again, check Y_ (Yes) if it was, and N_ (No) if it was not; then proceed to the next column. The next column asks whether a specific diagnosis was made, so you should again check Y_ (Yes) or N_ (No) as appropriate. Complete the remaining columns for the item in the same way, and then go on to the next item. On Page 2, a similar item is asked, for which the information may be obtained from Form SF-93. Information for Page 3 can be obtained by going through the rest of the corps member's medical file.

Corps Member's Name ____

(TEAR OFF THIS PAGE AFTER FORM IS FILLED OUT AND RETURN COMPLETED FORM IN ENVELOPE PROVIDED.)

Figure 6-1 (continued)

HEALTH RECORD ABSTRACT | **MEDICAL FILES** | SUBSEQUENT MEDICAL CONDITIONS

Examine the Job Corps member's medical file and note below any visits to the center health office for any condition NOT noted on the previous pages of this form.

No.	Date of visit	What symptom or diagnosis was recorded?	Was a return visit recommended?		Was a return visit made?		Was any medication given?		Were other treatments given?	
			YES	NO	YES	NO	YES	NO	YES (Specify; e.g., hospitalization, referral, etc.)	NO
1.			Y _	N _	Y _	N _	Y _	N _	Y __ ____________	N
2.			Y _	N _	Y _	N _	Y _	N _	Y __ ____________	N
3.			Y _	N _	Y _	N _	Y _	N _	Y __ ____________	N
4.			Y _	N _	Y _	N _	Y _	N _	Y __ ____________	N
5.			Y _	N _	Y _	N _	Y _	N _	Y __ ____________	N
6.			Y _	N _	Y _	N _	Y _	N _	Y __ ____________	N
7.			Y _	N _	Y _	N _	Y _	N _	Y __ ____________	N
8.			Y _	N _	Y _	N _	Y _	N _	Y __ ____________	N
9.			Y _	N _	Y _	N _	Y _	N _	Y __ ____________	N
10.			Y _	N _	Y _	N _	Y _	N _	Y __ ____________	N

Figure 6-1 (continued)

Item no.	Test or examination	Was the test finding...			Was the condition confirmed by...			Was a clinical diagnosis entered of...			Was a return visit recommended?		Was a return visit made?		Was any medication given?		Were other treatments given?
			Yes	No*		Yes	No		Yes	No	Yes	No	Yes	No	Yes	No	Yes (Specify, e.g., hospitalization, referral)
57	Blood pressure	140/90 or higher	Y__	N__	Two more visits	Y__	N__	Hypertension	Y__	N__	Y__	N__	Y__	N	Y	N	Y
59	Distant vision	20/40 or worse in better eye	Y__	N__	--	Y__	N__	Defective vision	Y__	N__	Y__	N__	Y	N	Y	N	Y
	Near vision	J6 or higher, 50% or less	Y__	N__	--	Y__	N__	Defective vision	Y__	N__	Y__	N__	Y	N	Y	N	Y
18 through 43, 73-74	Any condition noted as requiring treatment while in Job Corps	(List conditions) ____________			--	Y__	N__	--	Y__	N__	Y__	N__	Y	N	Y	N	Y
		____________			--	Y__	N__	--	Y__	N__	Y__	N__	Y	N	Y	N	Y
		____________			--	Y__	N__	--	Y__	N__	Y__	N__	Y	N	Y	N	Y
HEALTH RECORD ABSTRACT		FORM SF-93				INITIAL MEDICAL HISTORY											
40	Any condition noted as requiring treatment while in Job Corps	(List conditions) ____________			--	Y__	N__	--	Y__	N__	Y__	N__	Y	N	Y	N	Y
		____________			--	Y__	N__	--	Y__	N__	Y__	N__	Y	N	Y	N	Y
		____________			--	Y__	N__	--	Y__	N__	Y__	N__	Y	N	Y	N	Y

Figure 6-1 (continued)

Age Code [|] Sex Code [ ] Status Code [ ] Center Code [| |] Date sent to center | | | | | | | | |

HEALTH RECORD ABSTRACT **FORM SF-00** **INITIAL MEDICAL EXAMINATION**

Item no.	Test or examination	Was the test finding...			Was the condition confirmed by...			Was a clinical diagnosis entered of...			Was a return visit recommended?		Was a return visit made?		Was any medication given?		Were other treatments given?	
			Yes	No*		Yes	No		Yes	No	Yes	No	Yes	No	Yes	No	Yes (Specify, e.g., hospitalization, referral)	
45	Urine B) Albumin	1+ or more	Y__	N__	2nd Specimen	Y__	N__	Urinary Tract Condition	Y__	N__	Y_	N	Y	N	Y	N	Y	N
45	C) Sugar	1+ or more	Y__	N__	2nd Specimen	Y__	N__	Diabetes	Y__	N__	Y__	N__	Y	N	Y	N	Y	N
47	Serology	Positive	Y__	N__	2nd Specimen	Y__	N__	Syphilis	Y__	N__	Y__	N	Y	N	Y	N	Y	N
50	Hematocrit - Male	Less than 34%	Y__	N__	--	Y__	N__	Anemia	Y__	N__	Y__	N__	Y	N	Y	N	Y	N
	- Female	Less than 32%	Y__	N__	--	Y__	N__	Anemia	Y__	N__	Y__	N	Y	N	Y	N	Y	N
	OR																	
	Hemoglobin - Male	Less than 12.5 gms.	Y__	N__	--	Y__	N__	Anemia	Y__	N__	Y__	N	Y	N	Y	N	Y	N
	- Female	Less than 10.5 gms.	Y__	N__	--	Y__	N__	Anemia	Y__	N__	Y__	N__	Y	N	Y	N	Y	N
50	Pregnancy test	Positive	Y__	N__	--	Y__	N__	Pregnancy	Y__	N__	Y__	N__	Y	N	Y	N	Y	N
50	Gonorrhea culture - Female	Positive	Y__	N__	--	Y__	N__	Gonorrhea or P.I.D.	Y__	N__	Y__	N__	Y	N	Y	N	Y	N
50	Gonorrhea smear or - Male	Positive	Y__	N__	--	Y__	N__	Gonorrhea	Y__	N__	Y__	N__	Y	N	Y	N	Y	N

6.3.1 Health Education

Job Corps requires that each center conduct a mandatory health education course. These courses last up to six weeks and cover a wide range of health topics. The Cleveland Center, however, offered the entire health education course during a six-hour orientation session. The personnel in Cleveland indicated that health education has been an area somewhat slighted because of lack of funds. Other centers used the orientation session as an introduction to center health policies and provided health education weekly in a school course format.

Nutritional information was provided at all centers as part of the health education course. In addition, food service managers at the centers provided balanced diets in the cafeteria. Although Corpsmembers were generally able to choose from a flexible menu, "junk foods" were not available in the cafeteria. These could, however, be purchased at nearby canteens or grocery stores. Students were usually not allowed to take food out of the cafeteria. Food service managers at the centers felt they were providing both nutritious meals and a variety of food choices.

Centers varied in the amount of formal attention they paid for weight control in the health program. Atlanta had a weight-watchers club. The Keystone Center maintained that between their physical fitness program and a weight-watchers club in town, the problem received adequate attention. At the Cleveland Center, Corpswomen with a weight problem were referred to a physician who suggested special diets. At Portland, non-amphetamine diet pills were issued by the infirmary. At Breckenridge, an overweight program was being planned.

Sex education was provided in all centers. At Breckenridge, sex education was taught in class, at the clinic, and during weekly family planning sessions. Birth control devices were available at the health offices and in family planning clinics. Some centers required parental permission before certain birth control devices could be dispensed.

It is a general health policy at Job Corps Centers to require that linens be changed weekly and dormitories cleaned daily. As suggested by personnel at the Breckenridge Center, personal hygiene problems tended to be controlled by peer pressure. Policies with respect to cigarette smoking varied considerably among centers. For example, the Atterbury Center placed no restrictions on smoking, while the Keystone Center did not permit smoking in classes, dormitories, or in the cafeteria.

6.3.2 Health Care

All centers visited had infirmaries that were staffed 24 hours a day, seven days a week. Most medical problems were treated during office hours established at the clinic, however. Some centers required an appointment to see the nurse; others worked on a walk-in basis. All were staffed to deal with emergencies immediately.

In all instances, there was a physician at the clinic at least part-time, and one on call at all times. Specialized health care, such as optometry, gynecology, and psychiatry, were available at all centers, although access to these specialists was limited to those referred by the primary care staff at the health office. Although dental care for emergencies was available to all enrollees, preventative treatment was provided only to those who had been enrolled at least three months.

This portrait of health care services is reasonably consistent throughout Job Corps, as National Office regulations govern many of the procedures.

6.4 Analysis of Findings of the Health Services Substudy

The results of the health services substudy are provided in this section. Before they are discussed, however, a few comments should be made about the quality of the data and the nature of the sample on which the findings were based.

The data collection forms for the prevalence study called for results of tests which ordinarily were administered to all enrollees at entry. Some centers did not, however, administer the full range of tests. At the Atterbury Center, for example, neither hematocrit nor hemoglobin tests were administered.* In most centers, however, all tests were given, and positive results were verified where appropriate through testing of second specimens.

Center staff usually did not fill in the space provided,on the data collection form for other conditions requiring treatment while in

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*The reason for this was that such tests are only required for females, and Atterbury was just beginning to admit women at the time of the study.

Job Corps. Although this may have been a staff oversight, it is probably safe to assume that the youngsters in the sample were a healthy group.

Large variations were found in the health office visits section of the data -collection form. Some Centers (e.g., Cleveland) were either unusually meticulous about recording each visit or had exceedingly high visitation rates. Other Centers grouped visits, an indication that visits were not recorded as they occurred. It should be noted that differences among centers with respect to incidence and prevalence of medical disorders, discussed below, as well as number of visits made by enrollees, might be attributable to extraneous variables--the care taken by center health staff in filling out the data-collection forms, the level of specificity provided by them on the forms, individual center health care policies, or various situational variables (accessibility of infirmary or health care personnel).

Although visitation rates can be calculated from the study results, the columns on treatment did not include enough information to assess its effectiveness. Not enough information was provided on most forms to permit analysis. In any case, it would be difficult to assess the adequacy of treatment for a medical condition without detailed symptomatology, which was not provided. Therefore, the treatment columns of the form were not analyzed.

All seven centers participating in the main study cooperated in the medical substudy. Although there were differences from center to center in the level of detail on the data collection forms, there was no apparent difference in the percentage of terminees for whom we received these forms. As Table 6-1 indicates, the proportion of the health services substudy sample from each center reflected closely the proportion of main study sample from each center (with only two minor exceptions).

A total of 262 medical forms, from 156 male enrollees and 106 female enrollees, were analyzed in the course of the substudy. The range in ages was from 17 to 20, with the majority of enrollees 18 years of age.

6.4.1 Prevalence Findings

Analysis of the prevalence data encompassed a description and tabulation of preliminary disorders found by the battery of medical tests given at enrollment. For purposes of this study, enrollees were classified as

Table 6-1

Number and Percentage of Enrollees in Main Study and in Medical Substudy, by Center

Center	Enrollees in Main Study (Persisters and Dropouts)		Enrollees in Medical Substudy	
	N	%	N	%
Atterbury	223	58.8%	131	50.0%
Cleveland	66	17.4	39	14.9
Keystone	33	8.7	27	10.3
Atlanta	18	4.7	14	5.3
Pittsburgh	16	4.2	25[a]	9.5
Breckenridge	14	3.7	18[a]	6.9
Portland	9	2.4	8	3.1
TOTAL	379	100	262	100

[a] Number of medical substudy participants is greater than number of main study participants of this center due to failure to track enrollees after termination for Posttest Interview for main study.

either (1) negative on all initial tests, (2) negative on all tests as verified by second specimens, or (3) having a prevailing medical condition. Prevalence was disaggregated by disorder.

In the initial battery of medical examinations administered to the enrollees, over 40 prevalent medical conditions were discovered. The majority of these conditions were vision related;* 16 for hyperopia (far sightedness), and six for both myopia (nearsightedness) and hyperopia.. Eyeglasses were prescribed when necessary (i.e., when the new enrollee did not own a pair). Positive hematocrits (a sign of anemia) were found for six enrollees. Four cases of syphilis and another four of gonorrhea were discovered on admission. In addition, two enrollees were found to have high blood pressure and another three had positive urine albumin tests (indicative of a urinary tract infection).

That over half the disorders found on the initial exam were vision-related indicates that this kind of health screening is particularly valuable in an educational program such as Job Corps. Having poor vision diagnosed and treated is extremely important, and may have been as significant as other program services in helping to make these youth more employable.

The 41 youth with disorders discovered at entry represented 14% of the number of youth examined. A quantifiable benefit of Job Corps is its diagnosis and treatment of health disorders.

6.4.2 Incidence Findings

Analysis of incidence results was performed by means of categorization and enumeration of enrollee-initiated visits to the center health offices. The variables examined included frequency of visits and the level of enrollee compliance with medical recommendations. The frequency of visits and level of compliance was analyzed by each major set of disorders or symptoms and by center.

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*Centers varied in their response to the item on eyesight-related disorders. Some Centers chose to note enrollees with known eye problems (i.e., already wore glasses), while others considered as a positive finding only those cases discovered for the first time.

The categorization of symptoms and disorders was difficult for project staff because of wide variations in terminology. Eight categories of symptoms were empirically derived from the returned medical data forms as follows:

- Cold and flu: These refer to head colds, sore throats, coughs, and routine upper respiratory infections. Nontension headaches were also placed in this category. Where symptoms such as stomach aches and watery eyes were found in conjunction with the above symptoms, visits were placed in this category.
- Genitourinary: This category refers to venereal diseases, vaginal infections, pregnancies, painful or absent menstrual periods, and other disorders/conditions that would generally be treated by a gynecologist or obstetrician. Male GU problems, such as venereal disease and painful urination, were also grouped in this category. Guidance and planning visits with regard to birth control, pregnancy, and VD were included here.
- Gastro-intestinal: These refer to digestive problems in the absence of other symptoms.
- Dental: These included toothaches and other problems involving the teeth, gums, and mouth.
- Vision: These include problems typically treated by an optometrist, such as blurred vision.
- Asthma, Allergies, bronchitis: Self-explanatory.
- Minor Injuries: These included cuts, abrasions, contusions, and general muscle and bone aches and pains. Sprains and strains are also included in this category.
- Dermatological: These conditions included rashes, skin inflammations, acne, and insect bites.
- Other: Conditions which did not fall in the above categories were placed in this category.

Approximately 1,400 health office visits were made by the 262 enrollees followed in this substudy. The mean number of visits per enrollee was 5.3, over an average Job Corps length of stay of three months. The median number of visits was less than three, however. As Figure 6-2 shows, 58 enrollees made zero visits and another 61 make only one to two visits; at the other extreme, nine hundred thrity-seven (67%) of the visits were made by 16 percent of the sample population (42 enrollees). Therefore, the analyses which follow were largely influenced by those 42 enrollees who made 11 or more infirmary visits.

Table 6-2 shows the distribution of health office visits by disorder or symptom. As that table indicates, the plurality of visits (35%) was for cold and flu symptoms. Many of these were for headaches. Genitourinary

Figure 6-2

Frequency Distribution of Health Office Visits
(Total number of visits is 1,401)

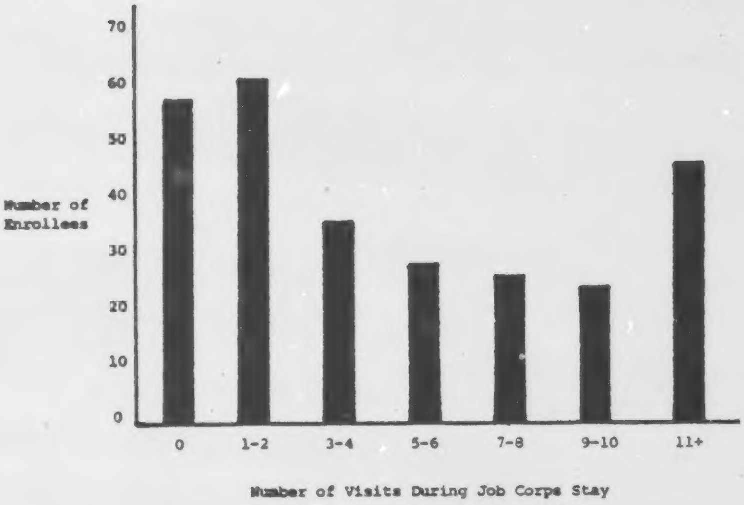

Table 6-2

Distribution of Health Office Visits by Disorder or Symptom

Disorder or Symptom	Percentage of Visits
Cold and flu symptoms	35%
Genito-urinary problems	17%
Gastrointestinal symptoms	12%
Minor injuries	11%
Dental problems	9%
Other problems	6%
Dermatological symptoms	4%
Eye-related disorders	3%
Asthma, allergies, bronchitis	3%

problems were the next most common reason for visits (17%). Most of these visits involved female enrollees with painful or absent menstrual periods. Some male problems of painful passage of urine were also recorded. Gastrointestinal distress made up 12% of total visits. The majority were non-serious, with only one case of appendicitis identified. In that instance, the patient was referred to a local hospital, and an appendectomy was performed. Minor injuries, the typical day-to-day cuts, abrasions, strains, and muscle pains, were the next largest visit cause, 11% overall. This was followed by dental complaints (9%), other problems (6%), dermatological symptoms (4%), eye-related disorders (3%), and asthma, allergies, and bronchitis (3%). The "other" category included nervous disorders, (e.g., tension headaches, hyperventilation, heart palpitations, insomnia), ear problems (e.g., loss of hearing, painful earlobes, impacted wax), dizziness, positive tuberculin tests, alleged rapes, psychiatric disorders (depression, alcoholism), weight problems, seizures, hemorrhoids, fainting, and bivalent sickle cell anemia.

6.4.3 Comparison Among Centers of Health Care Delivery

For reasons stated previously, even the limited intercenter analysis undertaken had methodological problems. All findings discussed below must be qualified by the limitations inherent in our data collection system. Frequency counts of health office visits may have been affected by the degree of conscientiousness in recording. Levels of compliance with recommended treatments were also difficult to assess. Some centers requested return visits only for fairly severe problems, while other centers requested return visits for almost all disorders. Therefore, the intercenter comparisons discussed below should be considered neither highly definitive nor highly precise.*

Individual center health office visitation rates varied considerably, according to our data. Much of the variation might be explained by the differences in care taken in preparing the data-collection forms. Despite this possibility, however, the data did yield some interesting findings. The three centers (Cleveland, Keystone, and Atlanta) which had all or almost all female enrollees in their medical substudy sample recorded the highest mean number of health office visits per enrollee, 18, 8, and 5, respecitvely. There was, clearly, a sex differential in visit rates in this sample. The other mean visit rates are indicated in Table 6-3. At the time of the study the Cleveland center was the only center in the group where an extensive course in health care was not provided, and its exceedingly high rate of visitation might therefore have been related to lack of health education beyond the orientation period.

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*Portland's sample was very small--8 enrollees--so additional care should be taken in interpreting the findings for this center.

It might be speculated that health office visitation rates were related to enrollees' length of stay, that is, the longer an enrollee stayed at a center, the more likely he or she was to frequent that center's health office. We examined this possibility by comparing the center data for length of stay, calculated for the main study sample, with the center data for total number of clinic visits, calculated for the medical substudy sample. Thus, while the data are not from identical samples, they can provide insight into the issue.

Table 6-4 shows the mean length of stay and the mean number of clinic visits per enrollee in the substudy. Visual inspection of these data suggest that length of stay was not related to mean number of enrollee visits. This is confirmed by a fairly small Spearman rank-order correlation (rho) for these data of -.21, which suggests, if anything, a tendency toward an inverse relationship of length of stay and number of health office visits. The visitation rates by symptom and center are shown in Table 6-5. For three of the symptom categories -- colds and flu, minor injuries, and dermatological -- visitation rates were roughly consistent across centers. Surprisingly, GU problems accounted for a larger proportion of all visits in male centers than in female ones. For the other symptom categories, the visitation rates varied widely across centers, suggesting that centers may have put different degrees of stress on reporting and attending to different types of more serious symptoms. Of course, the visitation rate variation across centers among these symptom categories may well reflect different incidence and contagion situations at these widely scattered centers at that time. Again, we must caution against giving too much weight to these intercenter comparisons due to the many problems in data reporting and the sampling of substudy participants.

Table 6-3

Health Office Visitation Rates by Center

Center	N	Total No. Visits	Mean No. Visits
Atterbury	131	297	2.3
Cleveland	39	692	17.7
Keystone	27	216	8.0
Atlanta	14	71	5.1
Pittsburgh	25	24	1.0
Breckenridge	18	64	3.6
Portland	8	37	4.6
ALL	262	1,401	5.3 (mean)

Table 6-4

Comparison of Mean Length of Stay and Mean Number of Health Office Visits

Center	Mean Length of Stay (days)[1]	Mean Number of Enrollee Visits[2]
Atterbury	110	2.3
Cleveland	114	17.7
Keystone	57	8.0
Atlanta	154	5.1
Pittsburgh	125	1.0
Breckenridge	141	3.6
Portland	107	4.6
All	110	5.3

[1] Calculated from main study sample (N = 379)

[2] Calculated from medical substudy sample (N = 262)

Table 6-5

Infirmary Visits and Visitation Rates by Center and Symptom Category

Center	Symptom Category																			
	All		Cold & Flu		Genito-Urinary		Gastro-Intestinal		Minor Injuries		Dental		Other		Dermatological		Eye-Related		Asthma-Related	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Atterbury	297	100%	98	33.0%	14	23.0%	15	5.1%	45	15.2%	59	19.9%	33	19.9%	21	7.1%	5	1.7%	7	2.4%
Cleveland	642	100%	260	37.6%	145	22.5%	112	16.2%	70	10.1%	41	5.9%	25	3.6%	20	2.9%	11	1.6%	8	1.2%
Keystone	216	100%	83	38.4%	37	17.1%	27	12.5%	18	8.3%	14	6.5%	13	6.0%	11	5.1%	6	3.8%	7	3.2%
Atlanta	71	100%	22	31.0%	14	19.7%	9	12.7%	8	11.3%	5	7.0%	1	1.4%	2	2.8%	7	9.9%	3	4.2%
Pittsburgh	24	100%	6	25.0%	0	0.0%	2	8.3%	2	8.3%	4	16.7%	4	16.7%	1	4.2%	1	4.2%	4	16.7%
Breckenridge	64	100%	2	3.1%	21	32.8%	5	7.8%	3	12.5%	0	0.0%	3	4.7%	2	3.1%	11	17.2%	12	18.8%
Portland	37	100%	18	48.6%	7	18.9%	0	0.0%	4	16.2%	0	0.0%	4	10.8%	2	5.4%	0	0.0%	0	0.0%
Total	1401	100%	480	34.9%	238	17.0%	170	12.1%	157	11.2%	123	8.8%	83	5.9%	59	4.2%	41	2.9%	41	2.9%

Note: Percentage figure is for percentage of visits for a symptom of all visits to that center's health office.

Compliance with recommendations for return visits is shown in Table 6-6. Atterbury, Pittsburgh, Breckenridge, and Atlanta showed very high compliance percentages (around 90 percent), while Keystone, Cleveland, and Portland showed relatively moderate compliance levels (around 55 percent). With the exception of the Atlanta center, our sample of the high compliance centers is predominantly male, and our results might be interpreted to suggest that male Job Corps enrollees were more likely than females to follow up on medical recommendations. In this regard, it is interesting that the male enrollees in the main study sample scored consistently (although not significantly) higher at pretest on the Attitude Toward Authority Scale), i.e., they were more deferential toward authority than were females (see Chapter 4.1 above).

6.5 Conclusions

It should be stressed again that the results of this study are by no means definitive. Recognizing the limitations noted above in the data-collection process, however, several tentative conclusions can be drawn about medical care in Job Corps.

Job Corps does appear to provide tangible medical benefits to enrollees. The initial medical screening examination uncovered prevailing medical conditions among 14 percent of the enrollees. Granted, some of the enrollees may have known about their conditions but also knew that they would receive medical attention upon enrollment in Job Corps and so did not seek treatment before Job Corps. Still, a considerable percentage of medical conditions was undoubtedly uncovered in the screening examination. Some of these conditions (e.g., venereal disease) have obvious epidemiological consequences, and so their discovery had even wider impact.

The number of infirmary visits (a mean of 5.3 visits during a mean length of stay of 110 days, yielding a mean frequency of one infirmary visit every 21 days) suggests further that Job Corps enrollees received medical attention that they might otherwise not have received. It is difficult to conceive that disadvantaged youth would normally be able, on the "outside," to receive medical attention an average of once every three weeks. In fact, national statistics indicate that low income blacks of this age group visit a medical facility once every 215 days, or one-tenth as often as this sample did in Job Corps.

Table 6-6

Compliance Levels with Health Office Recommendations

Center	Percentage Complying with Recommendations
Atterbury	88%
Cleveland	53%
Keystone	58%
Atlanta	92%
Pittsburgh	88%
Breckenridge	83%
Portland	50%
All	70%

Concerning the health care and health education that enrollees received in Job Corps, several conclusions deserve discussion. For all of the possible biases that may have been introduced in the data collection, the finding that the one center with an extremely high average number of health office visits per enrollee was also the one center which paid scant attention to formal health education suggests, at least tentatively, that health education may contribute toward a decrease in enrollees' seeking of medical care. In other words, there may be a need for health information among Job Corps enrollees which, at the center with the least amount of formal health education, is satisfied by the enrollees' obtaining it through infirmary visits.

The findings also suggest that, although females may initiate more health office visits, males comply more with recommendations made by health office personnel (although this finding may have been confounded by other center-specific conditions). Job Corps may want to give greater emphasis to follow-through on medical care recommendations provided to females, while at the same time monitoring the reasons for health office visits of females to see if they are excessive, and if health education in specific areas can reduce what may be informational visits.

A small percentage of enrollees accounted for a disproportionately large percentage of clinic visits. While this finding parallels the situation in society in general, it suggests that some attention might be paid to this issue by Job Corps, so that health care services may be more efficiently provided.

Many of the enrollees with high clinic visitation rates may have been more in need of counseling than of general medical care. This was indicated by the nature of visits (every day or every other day within the findings of Job Corps medical personnel (i.e., no apparent medical cause). There were a number of enrollees whose complaints (e.g., hyperventilation, nervousness, insomnia, seizures, alleged rape) imply somatacization of emotional problems. Although seriously disturbed applicants to Job Corps are ruled ineligible, the incidence of emotional disorders in this sample suggests that counseling and psychiatric services provided by Job Corps are needed for this population.

Finally, it was noted that the more serious symptoms seemed to receive different amounts of attention from center to center. If further study bears this out, Job Corps may wish to issue guidelines in the area of minimum care standards.

APPENDIX A

STUDY DESIGN AND METHODOLOGY

1.0 STUDY DESIGN

This study to assess the non-economic impacts of Job Corps was seen by both the Department of Labor and by Abt Associates as laying the foundation for a broader study of Job Corps' non-economic impacts to be conducted at a later date. In that sense, then, this was designed as a pilot study of the non-economic impacts of Job Corps. This chapter discusses the objectives of the study and the design of the research. This project was planned to produce three products: an Outcomes Assessment Battery (OAB) which can be used for research on other employment and training programs and further research on Job Corps; a Handbook of Noneconomic Outcome Measures for Employment and Training Programs which instructs researchers in the use of the OAB; and this report, which presents the findings of a preliminary pretest-posttest study of about 500 Job Corps applicants.

1.1 Research Objectives

In order for a research design and methodology to be developed, the objectives of the research first had to be refined. As with any project of this size, scope, and complexity, deciding on project objectives was an interactive process. Early in the project, discussions among Abt Associates contract staff and DOL government technical representatives successively refined the project's objectives to the following:

- To develop an assessment instrument battery to measure certain noneconomic impacts of employment and training programs;
- To assess certain noneconomic impacts among selected Job Corps participants;
- To determine aspects of Job Corps programs which may contribute to noneconomic outcomes.

In each subsection below, the research objectives of this project are discussed more or less chronologically as they developed from the actual project methodology.

1.1.1 Development of a Noneconomic Outcomes Assessment Battery

The first objective of this project was to develop an assessment instrument package to measure selected noneconomic outcomes of employment and training programs. Existing literature was searched and experts were consulted in order to construct a battery of instruments which held promise of assessing the outcomes of interest according to certain criteria. This effort is described more fully in the Design Phase Report (March 1975) of this project and in Section 2.2 (Description of the Outcomes Assessment Battery) of this Appendix.

The instrument development phase resulted in two products. The first is the Job Corps Noneconomic Outcomes Assessment Battery, which was administered to this study's participants and is available for subsequent employment and training program research. The second is a Handbook of Noneconomic Outcome Measures for Employment and Training Programs, which can be used for further evaluations of Job Corps and similar programs. The Handbook describes each instrument selected for the battery and is produced as a separate volume.

1.1.2 Assessment of the Noneconomic Impacts of Job Corps

From the beginning of the contract, it was recognized that the assessment of the noneconomic impacts of Job Corps would be preliminary in nature and would not lead to findings that would be generalizable to the Job Corps as a whole. The Request for Proposal which originated this project recognized the inappropriateness of attempting to generalize about all Job Corps enrollees at all Job Corps centers on the basis of the small sample of centers to which the study was limited. For example, the RFP stated "If this approach (the application of the developed set of measures in a limited Job Corps setting) proves feasible and yields meaningful data, these measures could be applied on a broader scale to the Job Corps program and to other manpower programs." As the contract work progressed, the number of Job Corps centers included in the study expanded from one (as originally envisaged) to seven. Still, because these centers were not sampled randomly, nor study participants assigned randomly to treatment and control groups (for ethical and practical reasons), the "evaluative" component of this study is necessarily limited. The results of this study cannot be generalized to all Job Corps Centers, at all times, for all persons. All statements of the study's findings have these limits implicit in them. It remains for a larger study, much wider in scope, to provide a more complete evaluation of the noneconomic impacts of Job Corps.

APPENDIX B

BASELINE DATA ON THE THREE GROUPS

BASELINE DATA ON THE THREE GROUPS

As discussed in the previous chapters, membership in the "Persister", "Dropout" or "NoShow" group was determined after study subjects had responded to the pretest Instrument Battery. Their association with the study and their association with Job Corps were not dependent on each other in any way after the pretest Instrument Battery was completed at the Job Corps screener's office.

Because of this post-hoc design, there was no way of assuring that the three groups were comparable before the "treatment" (Job Corps attendance). Indeed, there were empirical reasons for believing that NoShows were not as motivated as those who enrolled, and therefore by definition not comparable. A decision was made to compare pretest scores of the Job Corps group and the NoShow group in order to determine whether there were any systematic differences. The first fifty NoShow instruments were analyzed in comparison to the first 350 or so Job Corps instruments. (As it turned out, the pretest was administered to many fewer NoShows). There were no significant differences on any of the 18 scales. This finding was considered sufficient evidence of the comparability of NoShows and Arrivals on these variables at the time of pretest.

Another issue that should be covered here is the comparability of the study sample to the Job Corps population. As mentioned several times in Appendix A, the present study was designed as a pilot study to test the feasibility of measuring non-economic impacts. As a pilot study, it was not intended to reflect the Job Corps population accurately. No generalizations to the Job Corps as a whole are made, so it was not necessary that the study sample be representative. Nonetheless, readers, of course, are interested in the characteristics of the study sample, and in how it differed from Job Corps as a whole. Both types of information are included in the discussion of baseline data below. The statements above serve simply as a caveat: Differences between the sample and the population are not important for the purposes of this study.

In the sections below, demographic baseline data on the three groups are presented. Such information was derived from two different sources: Data on sex, race, age and urban/rural background are taken from items on the pretest and posttest of the Outcomes Assessment Battery. The additional information was taken from the Job Corps Mainstream file, the computerized management information system used by Job Corps for research purposes.* Because of the confidentiality of the Mainstream file, all youngsters whose records were searched had first given Abt Associates permission to do so.

Basic Demographic Data Across Groups

Group Formation

All analysis in the study is focused on differences among the three groups of Job Corps applicants. "Persisters" were defined as youngsters who remained in Job Corps 90 days or more. This cutoff date was chosen to correspond with Job Corps termination categories; Category I and Category II** are the names used by Job Corps for those called Persisters here. "Dropouts" were defined as those who enrolled in Job Corps but remained on center less than 90 days. (Job Corps calls these Category III terminees). "NoShows" were defined as youngsters who applied to Job Corps, were accepted and assigned to a center, but who literally did not show up on the specified date for enrollment. Job Corps uses the same term and definition. The table below illustrates the distribution of study subjects into treatment groups.

Table 1

Group Formation

	Persisters	Dropouts	"NoShows"	TOTAL
Number	178	232	79	489
Percentage	38	45	16	100 %
Total Job Corps Percentage in 1976	37	33	30	100%

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* Our thanks go to John Amos, Program Analyst in the Job Corps Division of Program Review, for generating the data tape upon which these findings are based.

**Category I terminees are those who either graduate or stay 6 months or more; Category II terminees are those who stay 3 to 6 months. In this study, these two groups were not differentiated.

Although there is no problem, for the purposes of this study, in examining findings from groups of unequal size, it would be well to comment on the discrepancy in group sizes between the study and National Job Corps statistics. At the time the research design was developed, the study staff envisioned an even group division of about one-third of the applicants in each, like the overall Job Corps figures above. This breakdown had been relatively consistent in Job Corps for several years. At the time of the pretest, however, different parts of the country were being affected more or less strongly by the recession of the mid-70's. For Job Corps, this variation was reflected in the application and enrollment rates; areas of high unemployment had long Job Corps waiting lists and a low no-show rate. Instead of not showing up for Job Corps, many ambivalent youngsters probably enrolled. Hence the low no-show rate and high dropout rate. If the sites from which this sample of applicants taken were suffering from higher unemployment than average, this explanation of the discrepancy between the proportion of Job Corps NoShows in the study and the proportion in the entire Job Corps is plausible. There is no way of verifying it, however.

Another explanation lies in the well-known methodological bias called volunteerism. Job Corps screeners were asked to hand out instrument batteries to all applicants after their interview. The slow rate of receipt of completed pretests indicated that not all applicants were filling them out. It might be speculated that refusals came mostly from those applicants who, by the end of their screening interview, had already decided not to follow through on their applications. Hence, the finding that only half the applicants who became NoShows filled out the Instrument Battery. This theory leads to the inevitable conclusion that the small NoShow group is biased in favor of the more motivated applicants, i.e., those who were willing to spend an additional 45 minutes in the screener's office filling out a questionnaire. But, under that argument, all three groups should have been biased in that direction. Under the conditions of this study, there was no way in which the volunteer bias could be eliminated. If the NoShow group were more biased than the others in ways that might affect the study, the comparison of scale scores should have reflected that. Since there were no differences, it may be concluded that, although only well motivated NoShows became part of the sample, they were comparable to the Job Corps groups in the areas under study.

Male/Female Breakdown

Table 2

Male/Female Breakdown

	Persisters	Dropouts	No Shows	TOTAL	All Job Corps Contract Center Enrollees
Percent Male	60%	56%	56%	58%	58%
Percent Female	40%	44%	49%	42%	42%
Percent TOTAL	100%	100%	100%	100%	100%

The sample was 58% male, identical to the proportion in all Job Corps contract centers. The male/female ratio within each group is consistent with the total ratio.

Racial Breakdown

Early in the survey phase of the project, it became clear that almost all applicants in the study were black. The reason was that the pretest was administered only in large cities east of the Mississippi, where a large proportion of the disadvantaged population is black. In an attempt to add more white study subjects, the survey was later extended to Portland, Oregon and its local Job Corps Center, where almost all enrollees are white. The addition of Portland did not make a significant change in the study's racial profile, however, because most of the applicants pretested enrolled in Job Corps and stayed too long to be posttested. Table 3 displays the distribution of the study sample in terms of race and treatment group.

Table 3

Racial Breakdown
(in percentages)

	Persisters	Dropouts	NoShows	TOTAL	All Job Corps Contract Center Enrollees
Black	88	83	85	85	BLACK: 61
White	8	13	9	10	WHITE: 22
American Indian	< 1	1	1	< 1	SPANISH-SPEAKING: 12
Mexican-American	< 1	0	0	< 1	OTHER: 5
Puerto Rican	1	2	1	1	
Other	2	1	4	1	

Two comments should be made regarding the table above. One, the proportional distribution of the races, although highly skewed, is reasonably consistent among treatment groups. Two, a somewhat larger proportion of white youngsters is found in the Dropout group. This situation is a familiar one to Job Corps; in centers, especially large ones, where minorities predominate, white youngsters often feel out of place and consequently terminate early.

Age Breakdown

The ages of applicants were taken from birthdates entered on the post-test questionnaire. Because the study covered almost 18 months, it was necessary to standardize ages by subtracting birthdates from a common date. January 1, 1976 was chosen because it represents an approximate midpoint of the pretest survey period. Table 5 displays the ages of the study sample and the Job Corps population.

Table 4

Age Breakdown
(in percentages)

	Persisters	Dropouts	NoShows	TOTAL	All Job Corps Contract Center Enrollees
Under 16	3	6	1	3	-
16	34	35	39	33	26
17	27	27	34	28	24
18	19	15	22	18	21
19	10	10	10	10	15
20	7	7	9	7	15

This distribution approximates that of Job Corps as a whole, although this study population has about 10% more youth 16 years old and younger. This is not surprising, since younger applicants are usually sent to Contract Centers (such as those in the study) rather than Conservation Centers.* Within the study sample, the NoShow group was somewhat older, with 41% of the NoShows aged 18 or over compared to 36% and 32% of Persisters and Dropouts, respectively. Getting a job may have been a major reason for not showing up, and older youth have a better chance in a competitive job market.

Urban/Rural Background Breakdown

Although all youngsters in the sample applied to Job Corps in a screening office in one of the cities selected, it was considered important that the applicant's background be determined, because of the possible differential impacts of Job Corps on youngsters brought up in urban or rural areas. Table 5 displays the breakdown or urban/rural background.

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*Conservation Centers offer union-run draft training programs designed to lead directly into apprenticeship after Job Corps graduation. The unions cannot place those under 18 in apprenticeships so they prefer not to train them in Job Corps.

Table 5

Urban/Rural Background Breakdown
(in percentages)

Where have you lived most of your life?	Persisters	Dropouts	No Shows
In farm country outside the town	3	3	4
In a small town	9	7	8
In a city	88	90	89

As can be seen, recent rural to urban migration is not a characteristic of this sample. Job Corps does not keep statistics on this variable, so no comparison with the entire population is possible. With a few exceptions, all members of the study sample were living in a city of 250,000 or more at the time of application. In Job Corps as a whole, only 43% of enrollees come from large cities. The sample, however, was purposely taken from cities only.

Conclusions

Although there was no attempt to make this purposive sample representative of the Job Corps population, it fortuitously turned out to be representative by sex and somewhat representative by age. The three groups of applicants--Persisters, Dropouts and NoShows--were not actually sampled, and therefore were not stratifiable by any demographic variables. Nevertheless, the groups were virtually identical by sex and urban/rural background. There were some differences, none of them significant, in race and age.

Additional Demographic Information on Job Corps Groups

As an additional source of information, the Job Corps management information system was consulted. Personal data, mostly demographic, was accessed for all study subjects who were in the Job Corps file (all NoShows and some Dropouts and Persisters are missing from the file). As stated in the previous section, deviation of this sample from the Job Corps population should not be construed as a weakness of the sampling frame; no attempt was made to make the sample representative or to make generalizations to the entire program.

Some demographic items covered in the previous section are repeated here in order to display all variables according to internal Job Corps categories. The racial breakdown appears in Table 6.

Table 6

Group by Race (in percentages)

Males

N = 179	Persisters	Dropouts	Statistics
White	4	9	$\chi^2=1.53$ df=1 p =ns
Minority	96	91	

Females

N = 136	Persisters	Dropouts	Statistics
White	7	20	$\chi^2=4.01$ df=1 $p = < .04$
Minority	93	80	

For both sexes, whites tended to be Dropouts rather than Persisters. Differences were significant for women. Almost 75% of white women left after less than 90 days.

The next demographic variable, size of city of origin, is displayed in Table 7.

Table 7

Group by City Size
(in percentages)

	Persisters	Dropouts	Statistics
Less than 2500	3	2	$\chi^2=2.07$ df=3 p =ns
2500 to 50,000	3	5	
50,000 to 250,000	7	6	
More than 250,000	87	87	

Because patterns for males and females were identical here, only one table is presented. There are no differences between groups. Table 8 illustrates differences in welfare status.

Table 8

Group by Welfare Status (in percentages)

Males

N = 182	Persisters	Dropouts	Statistics
Yes	50	69	$\chi^2=6.32$ df=1 p = .01
No	50	31	

Females

N = 138	Persisters	Dropouts	Statistics
Yes	64	67	$\chi^2=3.11$ df=1 p =ns
No	36	33	

Job Corps appears to be less successful with males who were on welfare before enrolling. Over 60% of male welfare recipients dropped out early. There were no differences for women.

Applicants with a history of delinquency or crime are classified as "questionable." Each such case is considered for eligibility on an individual basis. Often a questionable youngster is permitted to enroll as an alternative to probation. The breakdown for the study sample appears in Table 9.

Table 9

Group by Behavior Category (in percentages)

Males

N = 180	Persisters	Dropouts	Statistics
Questionable	16	15	$\chi^2=1.22$ df=2 p =ns
Eligible	84	85	

Females

N = 136	Persisters	Dropouts	Statistics
Questionable	3	6	$\chi^2= .07$ df=2 p =ns
Eligible	97	94	

It is not surprising that more males than females were questionables. There were no differences between groups for either sex.

Educational attainment prior to Job Corps is illustrated by Table 10.

Table 10
Group by Highest Grade Completed (in percentages)

Males

N = 182	Persisters	Dropouts	Statistics
6th	0	2	χ^2=8.16 df=6 p =ns
7th	0	3	
8th	17	19	
9th	43	37	
10th	33	26	
11th	4	10	
12th	4	3	

Females

N = 138	Persisters	Dropouts	Statistics
6th	0	1	χ^2=3.63 df=6 p =ns
7th	3	0	
8th	11	9	
9th	28	32	
10th	28	26	
11th	13	12	
12th	17	20	

Although there were no significant differences in educational attainment for either sex by group, within both groups females entered Job Corps with more education than males (Persisters: χ^2=16.46; df=5; p=<.005. Dropouts: χ^2=16.88; df=6; p=<.01). These differences may help account for the consistent results in the findings section that women scored higher on the scales that test knowledge (see Chapters 3 and 5).

Summary

In general, the youngsters who became Persisters or Dropouts were alike in background. White women and men from families on welfare tended to terminate early.

1.1.3 Assessment of Job Corps Program Elements Related To Noneconomic Outcomes

The project's third objective was to ascertain, in a preliminary fashion, which specific aspects of various Job Corps training programs contribute to various noneconomic outcomes. This objective had a process focus; attention was paid here to Job Corps program elements which might be tied to noneconomic outcomes. A case study approach was deemed the most appropriate one to use here since the seven centers were not selected randomly, nor was the number of centers studied large.

Each center in the study was visited and center personnel were interviewed using a semi-structured interview protocol. The center study interviews focused upon program elements which could be related to the study outcomes. A variety of center personnel, ranging from center director to residential advisors, were interviewed, as appropriate, about various program elements relating to the study outcomes. In these interviews Abt staff attempted to ascertain critical components of the program.

1.2 Research Design

To achieve the three objectives described above, a research design was needed that would allow administration of the Outcomes Assessment Battery to a large number of respondents, that would determine the extent to which Job Corps impacted various noneconomic areas, and that would examine different program elements and determine in a preliminary fashion, what elements influenced what outcomes. The research design which seemed to meet these criteria and reach the project objectives in the most cost-effective manner, was a pretest-posttest, Nonequivalent Control Group Design.*

In this quasi-experimental design, the study participants were not assigned to treatment and control groups randomly, as is required in a true experimental design. Obviously, both ethical and practical considerations did not allow randomly assigning Job Corps applicants to a "treatment" status (participation in Job Corps) or to a "control" status (non-participation in Job Corps). Rather, the Job Corps applicants "selected" themselves for assignment to treatment and "control" groups by their subsequent behavior. When they applied at selected Job Corps screening sites, applicants were given the pretest questionnaire, that is, the Outcomes Assessment Battery. Of those applicants sampled, some did not show up for travel to, or enrollment in, their assigned Job Corps center; these participants were classified as NoShows. Of those applicants who did subsequently enroll in Job Corps, some terminated before the Job Corps "treatment" could reasonably be expected to have any effect (i.e., in less than 90 days). These study participants were classified as Dropouts. Finally, those applicants who enrolled in Job Corps and subsequently remained for at least 90 days comprised the treatment group, the Persisters. A time lag of about three months after termination from Job Corps was allowed before Dropouts and Persisters were tracked and given the Posttest interview. About nine months after their scheduled arrival date, NoShows were tracked and given the posttest interview.

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* Cook, T.D. and Campbell, D.T. The Design and Conduct of Quasi-Experiments and True Experiments in Field Settings. In M.D. Dunnette (Ed.), Handbook of Industrial and Organizational Research. Chicago: Rand McNally, 1976.

Figure 1-1 schematically shows the process by which the initial pool of Job Corps applicants were subsequently classified into the three study respondent groups. The resulting research design consisted, then, of two measurement points, a pretest and a posttest, and three groups of study participants: a treatment group of Persisters, a comparison group of Dropouts, and a "control" group of NoShows.

To obtain data on the contribution of Job Corps to the outcomes, the Job Corps centers to which the study participants were assigned were visited. Information was gathered at each site in order to inform the data analysis regarding the relationship of program elements and outcomes. Table 1-2 displays the types of center staff interviewed and the topics discussed.

Figure 1-1

Classification and Assessment of Study Participants

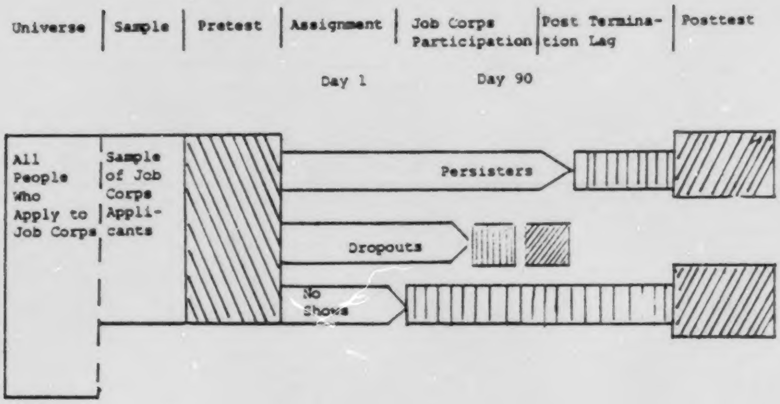

Table 1-2

Interview Topics for Center Visits

Topics:	Source People:							
	Center Director	Counselors	World of Work Instructor	Vocational Education Instructor	Residential Advisors	Dietitian	Health Education/ Physical Education Instructor	Physicians/Nurses
Self Esteem	X	X			X			
Attitudes Toward Authority	X	X	X	X	X			
Job Knowledge and Aspirations	X	X	X	X				
Job Seeking and Holding Skills and Job Satisfaction			X	X				
Nutrition and Nutrition Knowledge						X	X	X
Health Education							X	X
Medical Records for Substudy								X

1.3 Analysis Plan

Data analysis for the project was tailored to each of the three objectives of the study. The analysis for the first objective (development of a noneconomic outcomes assessment battery) was a psychometric evaluation of the instruments selected to measure noneconomic impacts. The analysis for the second objective (assessing noneconomic impacts of Job Corps on enrollees, as measured by these instruments) was more in the nature of a hypothesis-testing analysis, although for this pilot study specific hypotheses were not made or tested. Analysis for the third objective (determining program aspects contributing to noneconomic outcomes) was purely qualitative.

2.0 STUDY METHODOLOGY

Planning, conducting and monitoring the pretest--posttest Nonequivalent Control Group Design took two of the study's three years. The procedures followed for selection and development of outcomes and measures and for site and respondent selection are discussed in this chapter.

2.1 Criteria for Instrument Selection or Development

Investigation of the measurability of the outcomes initially listed was the major focus of activity during the project's design phase. In coordination with the outcome selection process, project staff identified, collected, and selected existing scales and developed original measures where adequate scales did not exist for assessing a particular study outcome. In considering the tradeoffs between the research advantages of previously validated instruments and the specific appropriateness of newly-generated instruments, cost considerations dictated a preference for instruments already validated and normed. It was not always feasible, however, to find such instruments, and, where necessary and feasible, new items were written to measure several of the outcomes.

In evaluating existing instruments or in developing new items, the primary criteria were as follows:

- Brevity - A time limit of about ninety minutes for the entire instrument package was set, meaning that individual instruments would have to be fairly brief.
- Self-administrability - Because the pretest was self-administered by Job Corps enrollees at the screening office where they applied, the instruments had to be self-administerable, or readily modified to be self-administerable.
- Appropriateness to population - Disadvantaged youth tend to have unique problems *vis-a-vis* tests and test-taking, namely, low reading level, unfamiliarity with objective tests and test-taking, anxiety about written instruments and short attention span. Instruments selected or developed had to have been designed to minimize these problems. The existence of normative data on disadvantaged youth was a distinct advantage for any instrument.
- Reliability - Instruments selected had to be internally consistent without being redundant and had to measure the same thing consistently over time. The latter consideration was particularly important since the experimental design called for a pre-post test interval averaging nine months.

- Validity - Instruments should, of course, measure what they are purported to measure. Evaluation of instruments paid close attention to validity considerations and evidence.
- Efficiency - The research design called for up to 2,000 instrument administrations. Considerations of time, cost, and ease of scoring consequently also guided evaluation of instruments.

2.2 Description of the Outcomes Assessment Battery

This section described the measures finally selected for submission to the Department of Labor as the Outcomes Assessment Battery (OAB). With slight modifications, the battery served as the assessment instrument for both the pretest and the posttest. Separate male and female versions of the test battery were used because three subscales of the Youth Assessment Battery (YAB) have male and female versions.* A few questions appeared on the pretest only; several groups of questions appeared on the posttest only. Table 2-1 is organized by outcome and summarizes the instruments and subscales selected. The discussion presented below is organized by instrument, with a description and major referenced provided for each instrument. The order in the Outcomes Assessment Battery was administered to study subjects, and the item numbers in brackets refer to item numbers in the final OAB.

Form 16 (FSI) is a Department of Labor form completed for each Job Corps enrollee. It provided an estimate of the enrollee's ability to speak English at the time of pretest. It also provided supporting demographic information needed in data analysis. It is not included in the Outcomes Assessment Battery, but was part of the data flow of the study.

Biographical Information Blank (BIB) (A1-A10) was developed by Richardson, Bellows, Henry & Co., Inc., under contract with the U.S. Department of Labor. It has been used extensively in Job Corps and, as such, it was appropriate to the study population. The seven "motivational" items selected from it (BIB items 7, 15, 39, 50, 51, 63, and 66) were selected as those which best differentiated both male and female Job Corps Persisters from Dropouts in previous research. Major references: Dropout Prediction and Intervention (Washington, D.C., General Services Administration: 1972).

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*The sex differences on the YAB were regarded negatively by many reviewers, and the Educational Testing Service plans to revise the scales to eliminate the separate forms. The use of separate forms was not intended to discriminate against females, but to permit respondents of each sex to identify with the cartoon characters which were used to illustrate the items.

Youth Assessment Battery (YAB) (B1 - B28, C1 - C30, D1 - D13) was developed at Educational Testing Service, also under contract with the Department of Labor, specifically to provide a nontraditional, innovative approach to the assessment of disadvantaged youth. The battery consists of fifteen scales. Extensive and careful research went into the development and validation of the battery. The three subscales selected for inclusion in this test battery (Attitudes Toward Authority, Job-Seeking and Job-Holding Skills, and Job Knowledge) have been shown to have the greatest validity among the noncognitive skill subscales. Major reference: Norman E. Freeberg, Development of Assessment Measures for Use with Youth - Work Training Program Enrollees. Phase II: Longitudinal Validation, Final report of U.S. Department of Labor Contract No. 41-9-005-32 (Princeton, New Jersey, Educational Testing Service: 1974).

Work Orientation Questionnaire (WOQ) - (E1 - E24) was developed by Leonard Goodwin as part of a Brookings Institution study of the motivations and orientations of welfare mothers. It is appropriate in wording and content for disadvantaged persons. Originally developed as a personal interview survey, it was easily modified to be self-administered. Major reference: Leonard Goodwin, "Do the Poor Want to Work?" (Washington, D.C., Brookings Institution: 1972).

Self-Esteem Scale (SEL) (F1 - F10) was developed by Morris Rosenberg. Of the various self-esteem scales considered (including the Self-Esteem Scale of the YAB, Coopersmith's Self-Esteem Inventory, and Fitts' Tennessee Self-Concept Scale), the Rosenberg scale was selected because of the extensive developmental research involved in its construction and the consistent research findings pertaining to its validity. It was originally validated on a sample of over 5,000 urban high school students. It was also the shortest and the most appropriately worded of the various scales for the disadvantaged adolescent population. Major reference: Morris Rosenberg, Society and the Adolescent Self-Image (Princeton, New Jersey, Princeton University Press: 1965).

Work-Related Attitudes Scale (WRA) (G1 - G26) was developed by Regis H. Walther, director of the George Washington University Manpower Research Projects, under a U.S. Department of Labor contract. It is a twenty-six item scale requiring only a sixth-grade reading level. It measures the attributes of optimism, self-confidence, and unsocialized attitudes. Major reference: Regis H. Walther, The Measurement of Work-Relevant Attitudes, Final Report of the U.S. Department of Labor Contract No. 41-7-004-9 (Washington, D.C., The George Washington University: 1970).

Ladder of Life (LAD) (H1 - H3) is a psychometric technique developed by Hadley Cantril to obtain self-report measures of human status. It was adapted for purposes of this study to provide a brief and easy-to-understand measure of long-term vocational aspiration. Major reference: Hadley Cantril, The Pattern of Human Concerns (New Brunswick, New Jersey, Rutgers University Press: 1965).

"Mulligan Stew" Questionnaire (STW) (I1-I14) was developed by Abt Associates as part of a contract with the U.S. Department of Agriculture to evaluate the efficacy of that Department's "Mulligan Stew" nutrition television series aimed toward 9-12 year olds. It proved to be a highly effective instrument in that study, and its straightforward wording and pictorial format ideally suited it for the measurement of nutrition information in this study. Selected items of the extensive questionnaire were chosen for the instrument battery. Major reference: Sydelle Stone Shapiro et al., An Evaluation of the Mulligan Stew 4-H Television Series, Final Report of U.S. Department of Agriculture Contract No. 12-05-300-256 (Cambridge, Massachusetts, Abt Associates Inc.: 1974).

Job Corps Information Survey (JCS) (Posttest #3-11) was developed by J-Squared, B-Squared Consultants under contract with the U.S. Department of Labor. The survey was administered to approximately 2,000 Job Corps enrollees. The seven items chosen from the over 200-item survey instrument were the items dealing with opinions and attitudes about Job Corps training. These items appeared only in the posttest battery. Major reference: J^2B^2 Consultants, Job Corps National Drug Survey, Final Report of the U.S. Department of Labor Contract No. JCC-2169-99 (Los Angeles, California, J-Squared, [illegible] Squared Consultants: 1973).

Newly Constructed Items were developed by project staff to cover those few areas of outcomes for which adequate existing instruments were not found to exist. Those areas included demographic identifiers (front page), health care and health habits (A11 - A16 and posttest items K14, K16, K19), court involvement (K1 - K5), job satisfaction (G27 - G30), health information (J1 - J17), changes in family relations and leisure time (posttest K7, K13, K17, K18, K20, K21). While, of course, these items could not and do not have a developmental history bearing upon their validity, reliability, and appropriateness for the study population, the items did draw upon Abt Associates staff's extensive capabilities and experience in survey design and questionnaire construction.

Table 2-1

Outcomes and Measures Selected

Outcomes	Aspects of Outcomes	Instrument Author	Instrument	Subscales or Items	Item Key (Pretest)	Comments
(Demographic Identifiers)	Name, sex, address, contact persons	Project staff	Newly constructed items		Front Page	Not an outcome, but necessary identifying information to allow for record keeping, tracking and analysis. Pretest only.
	Urban/rural, race	Richardson, Bellows, Henry & Co.	Biographical Information Blank	Items 11, 12, and 89	A4 - A6	
Social Attitudes	Attitudes toward authority	Norman Freeberg	Youth Assessment Battery	Attitude Toward Authority Subscale	D1 - D13	Has male and female versions
Self Attitudes	Self-esteem	Morris Rosenberg	Self-Esteem Scale		F1 - F10	
	Autonomy, independence, self-sufficiency	Richardson, Bellows, Henry & Co.	Biographical Information Blank	Items [illegible]5, 50,51,63 and 66	A1 - A3; A7 - A10	
Indirect job skill acquisition	Job-seeking and job-holding skills	Norman Freeberg	Youth Assessment Battery	Job-seeking and job-holding skills, job knowledge subscales	B1 - B28; C1 - C30	Has male and female versions
Work attitudes	Attitudes which will enhance job-holding ability	Leonard Goodwin	Work Orientation Questionnaire	Work Ethic Scale	E1 - E24	
	How individual perceives self	Regis Walther	Work Relevant Attitudes Scale		G1 - G26	
Vocational Aspirations	Level of work aspired to	Hadley Cantril	Ladder of Life		H1 - H3	
Job satisfaction	Satisfaction with specific job conditions	Project staff	Newly constructed items		G27 - G30	
Criminal Justice System Involvement	Involvement with police and courts	Project staff	Newly constructed items		K1 - K5	
Educational Attainment	School attendance, performance, achievement	Project staff	Newly constructed items		Posttest K5, K6	
Job Skill Confidence	Feeling of comfort and confidence in work	Leonard Goodwin	Work Orientation Questionnaire	Lack of Confidence in the Ability to Succeed in the World of Work Subscale	E1 - E24	
Nutrition Information and Behavior		Abt Associates	"Mulligan Stew" Questionnaire	Items I, 1-4b; II, 1-4; III, 1,2,6,12 and 13	I1 - I14	
Health Care and Health Habits	Data on height, weight, vision, etc.	Project staff	Newly constructed items		A11 - A16 Posttest K14-16, 19	
Health Information	Care of self physically, physical health and illness, understanding of sexual activity	Project staff	Newly constructed items		J1 - J17	
Training Satisfaction	Satisfaction with Job Corps training	J-Squared, B-Squared Consultants	Job Corps Information Survey	Items Q5-Q10, Q12	Posttest 3-11	Posttest only
Family Relations and Leisure Time	Changes in interpersonal relationships, family life, health habits	Project staff	Newly constructed items		Posttest K7-13, 17-18, 20-21	Posttest only

2.3 Sampling and Data Collection

Strictly speaking, the study did not involve sampling among the universe of interest--all people who apply to Job Corps. The necessity of obtaining a large enough and diverse enough pool of Job Corps applicants to pretest in a timely and cost-effective manner meant that a few cities in which large-scale Job Corps screening is done and several Job Corps centers which process a relatively large number of applicants would have to be used. Otherwise, it would have taken too long to obtain a large enough sample for the study. The generation of 1,210 completed pretest questionnaires required surveying applicants in five cities over a thirteen month period during 1975-76. Four hundred eighty nine posttests were completed during an overlapping thirteen month posttest period during 1976-77. Table 2-2 presents the cities and centers selected. Tables 2-3 and 2-4 present information on the sample.

Table 2-2

City-Center Pairings Included in Study

City	Centers
Atlanta, Georgia	Breckenridge, Kentucky[1] Atlanta, Georgia[2]
Chicago, Illinois	Atterbury, Indiana[1] Cleveland, Ohio[1a]
Philadelphia, Pennsylvania	Keystone, Pennsylvania[1] Atterbury, Indiana[1] Pittsburgh, Pennsylvania[3]
Pittsburgh, Pennsylvania	Keystone, Pennsylvania[1] Atterbury, Indiana[1] Pittsburgh, Pennsylvania[3]
Portland, Oregon	Portland, Oregon[1]

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[1] Coed Center

[1a] Coed Center but only females used in study

[2] Women's Center

[3] Men's Center

Table 2-3

Total Sample Size

COMPLETED PRETEST		1210
No posttest attempt made (did not terminate, no status notification received from DOL, etc.)	537	
QUALIFIED FOR POSTTEST		673
Could not locate for posttest	137	
Not available for posttest (in army, jail, deceased, etc.)	9	
Refused to take posttest	7	
Interviewer fraud on posttest	31	
COMPLETED POSTTEST		489

Table 2-4

Sample Size by Treatment Group and Sex

Group	Sex	N
Persisters	Males	103
	Females	75
Dropouts	Males	129
	Females	93
NoShows	Males	45
	Females	34

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Where to Get More Information

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